123 Washington Street Columbus, Indiana 47201 Phone: (812) 376-2550 Fax: (812) 376-2643





CITY OF COLUMBUS BOARD OF ZONING APPEALS (September 23, 2014 Meeting)

STAFF REPORT

Docket No. / Project Title: C/DS-14-22 (Horvath Tower – Inwood Drive)

Staff: Melissa Begley

Applicant: Horvath Towers

Property Size: 1 acre

Current Zoning: I-3 (Industrial: Heavy)

Location: The property is located on Inwood Drive, approximately 300 feet southeast

of the intersection of Barker Drive and Inwood Drive, in the City of

Columbus.

Background Summary:

The applicant has indicated that the proposed variance from Zoning Ordinance Section 6.8(G)(3) is for the purpose of allowing the lease area for a new cell tower to be located 14 feet from the 2 side and rear property lines. 36 feet less than the 50 foot minimum setback.

Preliminary Staff Recommendation:

Denial, criteria 3 has not been met.

Zoning Ordinance Considerations:

District Intent: The intent of the I-3 (Industrial: Heavy) zoning district is as follows: to provide locations for industrial manufacturing, production, assembly, warehousing, research & development facilities, and similar land uses. This district is intended to accommodate a variety of high intensity industrial uses in locations that minimize land use conflicts and provide the necessary supporting infrastructure.

Development Standards: Zoning Ordinance Section 6.8(G)(3) <u>Setback:</u> The required setbacks for the tower and related facilities shall be as follows: *Side and Rear Setback:* The minimum side and rear setback for all facilities shall be 50 feet from all property lines.

Current Property Information:				
Land Use: Undeveloped				
Site Features:	Grassy field			
Flood Hazards:	No flood hazards exist on this property.			
Vehicle Access:	Inwood Drive (Local, Industrial, Suburban)			

Surrounding Zoning and Land Use:				
Zoning: Land Use:				
North:	I-3 (Industrial: Heavy)	TIEM Recreation Area		
South:	I-3 (Industrial: Heavy)	The Christopher Stevens Corporation		
East:	I-3 (Industrial: Heavy)	KAMIC Manufacturing Facility (Piston Pins)		
West:	I-3 (Industrial: Heavy)	Enkei Manufacturing Facility (Wheel Rims)		

Interdepartmental Review:		
City Engineering:	City Engineering: No comments received.	
Code Enforcement: No comments received.		

Planning Consideration(s):

The following general site considerations, planning concepts, and other facts should be considered in the review of this application:

- 1. The applicant is requesting to build a new telecommunications tower on the subject property, which is located in the Woodside Business Center. The proposed height of the tower is 195 feet. The property is currently undeveloped and the new tower will be constructed to the rear of the lot. The applicant is requesting the lease area to be located closer to the property line than the ordinance allows. Specifically, Zoning Ordinance Section 6.8(G)(3) requires the minimum side and rear setbacks for all facilities to be 50 feet from all property lines. The applicant is requesting both side setbacks and the rear setback to be 14 feet. The actual proposed tower will be 61 feet from the side and rear property lines.
- New telecommunication towers are permitted in the I-3 (Industrial: Heavy) zoning district. This Board
 of Zoning Appeals request would not be needed if the required setbacks had been met. The purpose
 of the setbacks are to provide a certain level of comfort and safety to property owners adjacent to the
 telecommunication facility.
- 3. The nearest structure is approximately 109 feet to the north of the proposed tower. The nearest residential structure is approximately 4,861 feet from the proposed tower.
- 4. Section 6.8(D) of the Zoning Ordinance identifies the requirements to install a new Telecommunications Tower. Those items include but are not limited to the items below. The applicant has provided all the required documentation.
 - a. Engineer's Report describing the height and design of the new tower. This report also includes the tower's capacity (antenna capacity), structural adequacy, and certifies that the facility will not interfere with public safety telecommunications facilities.
 - b. A letter of intent stating that the owner will share use of the tower. This letter of intent commits the owner of the tower to allow co-location of antennas on the new tower.
 - c. A proof of compliance with Federal Communications Commission, Federal Aviation Administration, Indiana Department of Natural Resources, and all other federal and state requirements. Any tower 200 feet or greater must be cleared by the FAA (Federal Aviation Administration) according to the FCC. The FCC requires all antennas, regardless of tower height, utilizing the tower to be licensed with the Media Bureau which is a division of the FCC. The FCC, among other things, will review the proposed tower to ensure the intended

frequencies will not interfere with other frequencies. The FCC will forward those tower requests that are over 200 feet to the FAA for their review and consideration. According to the FCC (Federal Communications Commission) any tower 200 feet or greater and/or within 5 miles of an airport must registered with the FCC.

- A letter committing the removal of the tower if it were to be unused for a period of 12 consecutive months.
- 5. Section 6.8(E) of the Zoning Ordinance, Determination of New Tower Need, requires verification from a professional engineer that antennas cannot be accommodated on any existing or other approved tower within a 2 mile radius of the proposed tower. There are no towers located in a two mile radius from the subject property. The petitioner has stated that the need for this tower is to offload 4G traffic from other towers that are experiencing high demand for this service and the new tower will improve 4G network reliability.
- 6. Section 6.8(F) of the Zoning Ordinance provides design requirements for new towers, including lighting, height and signs. The applicant has met these requirements. This section also specifies details for co-location. All new telecommunication towers shall be designed, and engineered structurally, electrically and in all other respects to accommodate both the applicant's equipment and at least one additional antenna for every 50 feet in total tower height in excess of 75 feet. Based on the petitioner's request for a 195 foot tower, the proposed tower would be required to allow at least two additional antennas to co-locate on it. This has been met.
- 7. The only item for the Board's consideration is the setback variance. The Planning Department will verify that all other requirements are met prior to the issuance of a Zoning Compliance Certificate, including but not limited to Section 6.8(G) of the Zoning Ordinance which specifies site requirements for all new towers, including vehicular access, site area, setbacks, fencing and landscape screening.

Provisional Findings of Fact/Decision Criteria:

The Board of Zoning Appeals may approve or deny variances from the development standards of the City of Columbus Zoning Ordinance. The Board may impose reasonable conditions as part of an approval. A variance from the development standards may only be approved upon a determination in writing that:

1. The approval will not be injurious to the public health, safety, morals, and general welfare of the community.

Provisional Findings: The tower will be built to building code standards and an engineer's report has been provided certifying that the structure can withstand the typical weather patterns for Indiana. *This criterion has been met.*

2. The use and value of the area adjacent to the property included in the variance will not be affected in a substantially adverse manner.

Provisional Findings: The Woodside Business Center is an industrial park with existing industrial users and permits some of the heaviest industrial uses. The cell tower is located in the middle of the business center and it will not negatively impact any residential properties. It will not generate any noise, odor or product that would negatively impact the adjacent industrial properties. This criterion has been met.

3. The strict application of the terms of the zoning ordinance will result in practical difficulties in the use of the property. This situation shall not be self-imposed, nor be based on a perceived reduction of, or restriction on, economic gain.

Provisional Findings: The property is relatively small to support many of the permitted uses on an I-3 zoned property, however there are permitted uses that could utilize the site and meet the setback requirements. *This criterion has not been met.*

Board of Zoning Appeals Options:

In reviewing a request for <u>development standards variance</u> the Board may (1) approve the petition as proposed, (2) approve the petition with conditions, (3) continue the petition to a future meeting of the Board, or (4) deny the petition (with or without prejudice). Failure to achieve a quorum or lack of a positive vote on a motion results in an automatic continuance to the next regularly scheduled meeting.



SITE NAME:

COLUMBUS

PROPOSED 195' MONOPOLE
WITH 4' LIGHTNING ROD
PROPOSED TELECOMMUNICATIONS SITE



Know what's below.

Call before you dig.

DRIVE DIRECTIONS DRIVING DIRECTIONS FROM HORVATH COMMUNICATIONS [312 WEST COLFAX AVE.,

HEAD EAST ON W COLFAX AVE TOWARDS ST. JAMES CT; TURN RIGHT ONTO N MAIN ST, 2.9 MILES; TURN LEFT ONTO W CHIPPEWA AVE FOR 246 FEET; TURN RIGHT ONTO S MICHIGAN ST FOR 0.8 MILES; CONTINUE ONTO US-31 S FOR 118 MILES; TAKE KEYSTONE FKWY FOR 5.5 MILES; CONTINUE ONTO N KEYSTONE AVE FOR 1.0 MILES; TAKE EXIT FOR I-465 E, CONTINUE 19.4 MILES; TAKE EXIT 53B ONTO I-65 S FOR 42.2 MILES; TAKE EXIT 64 ONTO IN-58 W; TURN LEFT ONTO W 450 S FOR 0.3 MILES; TURN LEFT ONTO OLD LANE DR FOR 0.1 MILES; TURN RIGHT ONTO INWOOD DR FOR 0.3 MILES AND DESTINATION WILL BE ON THE LEFT.

DEPARTMENT	NAME / SIGNATURE	DATE
LAND/TOWER OWNER		
SITE ACQUISITION AGENT		
ZONING/PERMITTING AGENT		
A&E MANAGER		
CONSTRUCTION MANAGER		
RF ENGINEER		

PROJECT INFORMATION

COUNTY: BARTHOLOMEW

SITE ADDRESS: 6350 S INWOOD DRIVE COLUMBUS, IN 47201

TOWER OWNER HORVATH COMMUNICATIONS /APPLICANT: 312 WEST COLFAX AVE.

312 WEST COLFAX AVE. SOUTH BEND, IN 46601

LATITUDE: 39° 08′ 30.02″ LONGITUDE: 85° 57′ 07.85″

SCOPE OF WORK:

CONSTRUCTION DRAWINGS FOR:
A UNMANNED TELECOMMUNICATIONS FACILITY

SITE WORK, UNMANNED EQUIPMENT SHELTER ON A CONCRETE FOUNDATION AND UTILITY INSTALLATIONS

SHEET INDEX

TITLE SHEET

SURVEY:

B-1 TO B-1.1 SITE SURVEY

CIVIL:

C-1 OVERALL SITE LAYOUT
C-2 ENLARGED SITE LAYOUT
C-3 TOWER ELEVATION
C-4 TOWER EQUIPMENT INFORMATION
C-5 FOUNDATION DETAILS & NOTES
C-6 FENCE DETAILS & NOTES

C-7 CIVIL DETAILS
C-8 SITE SIGNAGE DETAILS

C-9 NOTES

ELECTRICAL

GROUNDING PLAN
UTILITY PLAN

E-3 EQUIPMENT GROUNDING PLAN
E-4 ELECTRICAL & GROUNDING DETAILS

E-5 H-FRAME DETAILS

LANDSCAPE:

LS-1 LANDSCAPE PLAN

CONTACT INFORMATION

FIRE DEPARTMENT

COLUMBUS CITY FIRE DEPARTMENT 1101 JACKSON ST

COLUMBUS, IN 47201 PHONE: (812) 376-2679

POLICE DEPARTMENT

COLUMBUS POLICE DEPARTMENT 123 WASHINGTON STREET COLUMBUS, IN 47201 PHONE: (812) 376-2600

ELECTRIC COMPANY

HOOSIER ENERGY

7398 N STATE ROAD 37 BLOOMINGTON, IN 47404 PHONE: (812) 876-2021

TELEPHONE COMPANY

TELEPH

BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE LOCATION

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE 318

AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION

TELECOMMUNICATIONS INDUSTRY ASSOCIATION TIA-222

STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND SUPPORTING STRUCTURES TIA-601

COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS IEEE-81, IEEE 1100, IEEE C62.41

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

2006 IBC (WITH AMENDMENTS)

2011 NEC OR LATEST AS ADOPTED BY JURISDICTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN.





312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER:

POD NUMBER: 14-2748

DRAWN BY: NAB

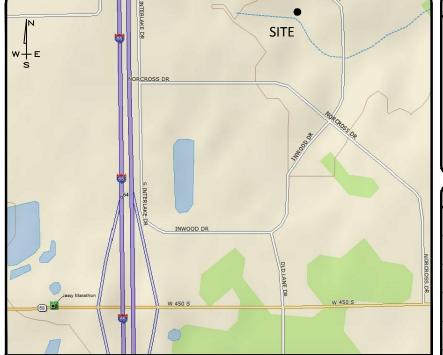
DRAWN BY: NAB
CHECKED BY: MEP
DATE: 06.17.14

SHEET TITLE:

TITLE SHEET AND PROJECT INFORMATION

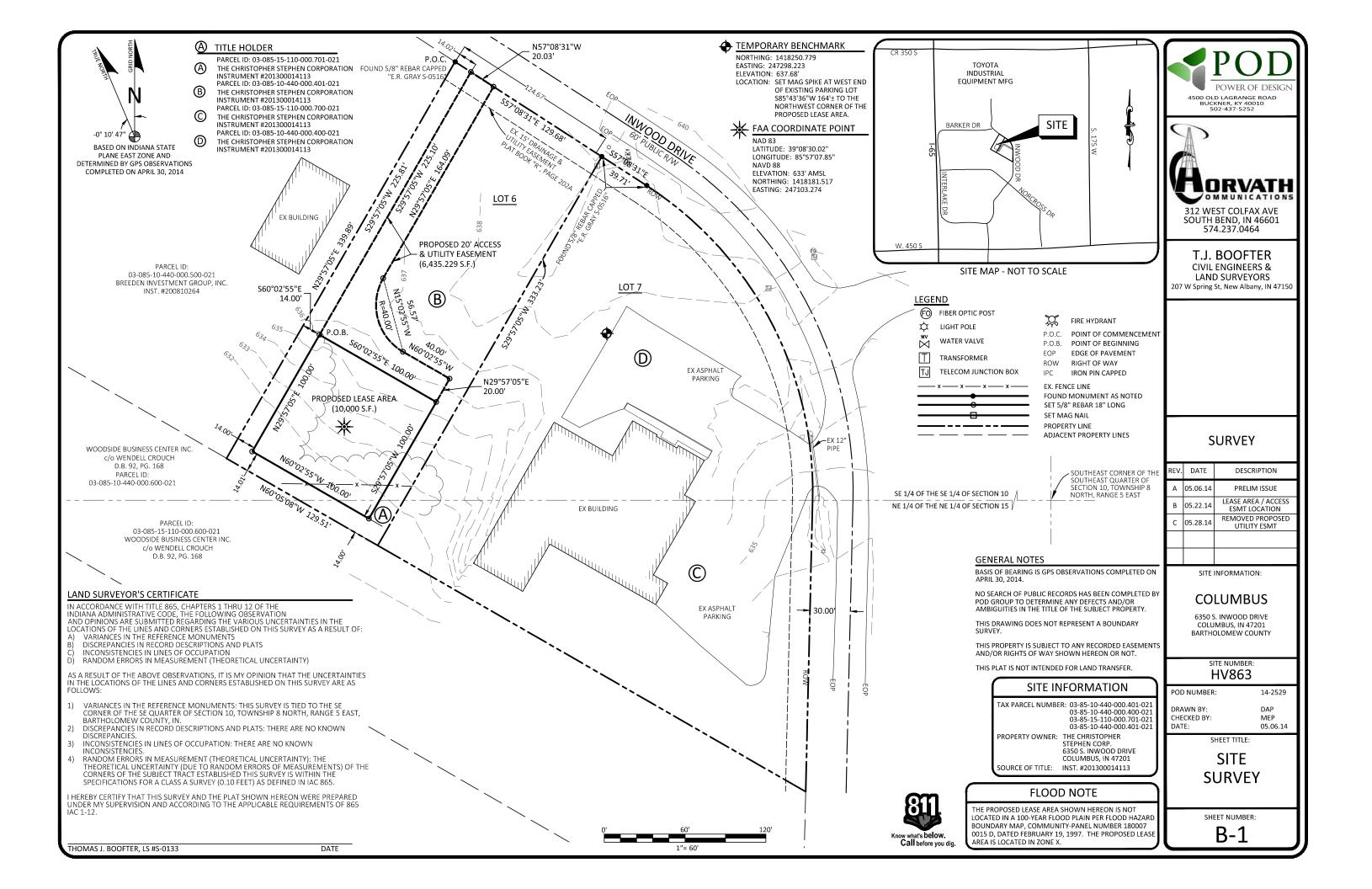
SHEET NUMB

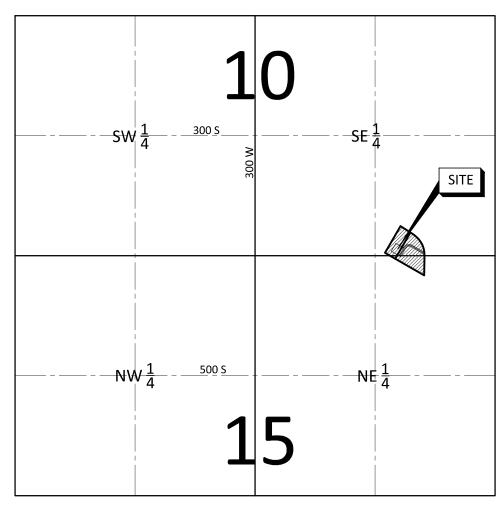
T-1



SCALE: NONE

VICINITY MAP





PART OF SECTION 10, TOWNSHIP 8 NORTH, RANGE 5 EAST, AND SECTION 15, TOWNSHIP 8 NORTH, RANGE 5 EAST BARTHOLOMEW COUNTY, INDIANA

▲ DENOTES FOUND MONUMENT AS NOTED ON B-1

DATE

LAND SURVEYOR'S CERTIFICATE

IN ACCORDANCE WITH TITLE 865, CHAPTERS 1 THRU 12 OF THE INDIANA ADMINISTRATIVE CODE, THE FOLLOWING OBSERVATION
AND OPINIONS ARE SUBMITTED REGARDING THE VARIOUS UNCERTAINTIES IN THE LOCATIONS OF THE LINES AND CORNERS ESTABLISHED ON THIS SURVEY AS A RESULT OF:

- VARIANCES IN THE REFERENCE MONUMENTS. DISCREPANCIES IN RECORD DESCRIPTIONS AND PLATS
- INCONSISTENCIES IN LINES OF OCCUPATION
- RANDOM ERRORS IN MEASUREMENT (THEORETICAL UNCERTAINTY)

AS A RESULT OF THE ABOVE OBSERVATIONS, IT IS MY OPINION THAT THE UNCERTAINTIES IN THE LOCATIONS OF THE LINES AND CORNERS ESTABLISHED ON THIS SURVEY ARE AS

- VARIANCES IN THE REFERENCE MONUMENTS: THIS SURVEY IS TIED TO A PIPE IN THE SE CORNER OF THE SE QUARTER OF SECTION 10, TOWNSHIP 8 NORTH, RANGE 5 EAST,
- BARTHOLOMEW COUNTY, IN. DISCREPANCIES IN RECORD DESCRIPTIONS AND PLATS: THERE ARE NO KNOWN
- INCONSISTENCIES IN LINES OF OCCUPATION: THERE ARE NO KNOWN
- RANDOM ERRORS IN MEASUREMENT (THEORETICAL UNCERTAINTY): THE THEORETICAL UNCERTAINTY (DUE TO RANDOM ERRORS OF MEASUREMENTS) OF THE ORNERS OF THE SUBJECT TRACT ESTABLISHED THIS SURVEY IS WITHIN THE SPECIFICATIONS FOR A CLASS A SURVEY (0.10 FEET) AS DEFINED IN IAC 865.

I HEREBY CERTIFY THAT THIS SURVEY AND THE PLAT SHOWN HEREON WERE PREPARED UNDER MY SUPERVISION AND ACCORDING TO THE APPLICABLE REQUIREMENTS OF 865

LEGAL DESCRIPTIONS

THE FOLLOWING IS A DESCRIPTION OF AN AREA TO BE LEASED FROM THE PROPERTY OF THE CHRISTOPHER STEPHEN CORPORATION, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PROPOSED LEASE AREA

BEING PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION OF 10, TOWNSHIP 8 NORTH, RANGE 5 EAST AND PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION OF 15, TOWNSHIP 8 NORTH, RANGE 5 EAST IN BARTHOLOMEW COUNTY, INDIANA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW

COMMENCING AT A FOUND 5/8" REBAR CAPPED "E.R. GRAY S-0516" IN THE SOUTH RIGHT OF WAY OF INWOOD DRIVE AND COMMON CORNER TO PROPERTY CONVEYED TO BREEDEN INVESTMENT GROUP, INC. RECORDED IN INSTRUMENT #200810264 AND CORNER TO PROPERTY CONVEYED TO THE CHRISTOPHER STEPHEN CORP. AS RECORDED IN INSTRUMENT #201300014113 (LOT 6) IN THE RECORDS OF BARTHOLOMEW COUNTY; THENCE WITH SAID COMMON BOUNDARY LINE, S29°57'05"W 225.81' TO A POINT; THENCE LEAVING SAID COMMON BOUNDARY LINE AND TRÁVERSING ACROSS THE LANDS OF THE CHRISTOPHER STEPHEN CORPORATION, S60°02'55"E 14.00' TO A SET 5/8" REBAR IN THE NORTHWEST CORNER OF THE PROPOSED LEASE AREA AND ALSO BEING **THE TRUE POINT OF BEGINNING** OF THE PROPOSED LEASE AREA; THENCE S60°02'55"E 100.00' TO A SET 5/8" REBAR; THENCE S29°57'05"W 100.00" TO A SET 5/8" REBAR; THENCE N60°02'55"W 100.00' TO A SET 5/8" REBAR; THENCE N29°57'05"E 100.00' TO THE POINT OF BEGINNING CONTAINING 10,000 SQUARE FEET AS PER SURVEY BY THOMAS J. BOOFTER, LS #S-0133 WITH T.J. BOOFTER, CIVIL ENGINEER AND LAND SURVEYOR, DATED APRIL 30, 2014.

PROPOSED 20' ACCESS AND UTILITY EASEMENT

BEING PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION OF 10, TOWNSHIP 8 NORTH, RANGE 5 EAST AND PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION OF 15, TOWNSHIP 8 NORTH, RANGE 5 EAST IN BARTHOLOMEW COUNTY, INDIANA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

COMMENCING AT A FOUND 5/8" REBAR CAPPED "E.R. GRAY S-0516" IN THE SOUTH RIGHT OF WAY OF INWOOD DRIVE AND COMMON CORNER TO PROPERTY CONVEYED TO BREEDEN INVESTMENT GROUP, INC. RECORDED IN INSTRUMENT #200810264 AND CORNER TO PROPERTY CONVEYED TO THE CHRISTOPHER STEPHEN CORP. AS RECORDED IN INSTRUMENT #201300014113 (LOT 6) IN THE RECORDS OF BARTHOLOMEW COUNTY; THENCE WITH SAID RIGHT OF WAY OF INWOOD DRIVE AND LINE OF THE CHRISTOPHER STEPHEN CORP. S57°08'31"E 14.02' TO A SET 5/8" REBAR IN THE NORTHWEST CORNER OF THE PROPOSED 20' ACCESS AND UTILITY EASEMENT AND BEING THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID SOUTH RIGHT OF WAY LINE AND WITH THE PROPOSED EASEMENT, S29°57'05"W 225.10' TO A SET 5/8" REBAR IN THE NORTHWEST CORNER OF THE PROPOSED LEASE AREA; THENCE WITH THE EAST LINE OF SAID LEASE, S60°02'55"E 100.00' TO A SET 5/8" REBAR IN THE NORTHEAST CORNER OF SAID LEASE AREA; THENCE LEAVING SAID LEASE LINE, N29°57'05"E 20.00' TO A SET 5/8" REBAR; THENCE N60°02'55"W 40.00' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE RIGHT HAVING A RADIUS OF 40.00', N15°02'55"W 56.57' TO A SET 5/8" REBAR; THENCE N29°57'05"E 164.09' TO A SET 5/8" REBAR IN THE SOUTH RIGHT OF WAY LINE OF INWOOD DRIVE; THENCE WITH SAID RIGHT OF WAY LINE, N57°08'31"W 20.03' TO THE POINT OF BEGINNING CONTAINING 6,435.229 SQUARE FEET AS PER SURVEY BY THOMAS J. BOOFTER, LS #S-0133 WITH T.J. BOOFTER, CIVIL ENGINEER AND LAND SURVEYOR, DATED APRIL 30, 2014.

LEGAL DESCRIPTION PER DEED OF RECORD (NOT FIELD SURVEYED)

LOT 6 & 7 OF WOODSIDE BUSINESS CENTER 5TH REPLAT. RECORDED IN PLAT BOOK "R". PAGE 202A. IN THE OFFICE OF THE RECORDER OF BARTHOLOMEW COUNTY, INDIANA.

TITLE OF COMMITMENT

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY POD GROUP, LLC. AND AS SUCH WE ARE NOT RESPONSIBLE FOR THE INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, UNRECORDED EASEMENTS, AUGMENTING EASEMENTS, IMPLIED OR PRESCRIPTIVE EASEMENTS. OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE AND THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY U.S. TITLE SOLUTIONS FILE NO. 47750-IN1404-5030, REFERENCE NUMBER HV863, DATED APRIL 25, 2014. THE FOLLOWING COMMENTS ARE IN REGARD TO SAID REPORT.

SCHEDULE B

DECLARATION OF COVENANTS MADE BY INDUSITES, INC. DATED AS OF 11/10/1978 IN BOOK 55 PAGE 725. (DECLARATION OF COVENANTS DOES APPLY TO THE SUBJECT PROPERTY, THE PROPOSED LEASE AREA AND THE PROPOSED 20' ACCESS & UTILITY EASEMENT.)

EASEMENT BY INDUSITES, INC. TO PUBLIC SERVICE COMPANY OF INDIANA, INC., AN INDIANA ITEM 7: CORPORATION, DATED 3/10/1989 RECORDED 3/31/1989 IN INSTRUMENT NO :89-2295. (EASEMENT DOES NOT APPLY TO SUBJECT PROPERTY.)

ITFM 8: EASEMENT BY INDUSITES CORPORATION TO PUBLIC SERVICE COMPANY OF INDIANA, INC., AN INDIANA CORPORATION, DATED 3/20/1989 RECORDED 5/22/1989 IN INSTRUMENT NO:89-4107. (EASEMENT DOES NOT APPLY TO SUBJECT PROPERTY.)

EASEMENT BY INDUSITES, INC. TO PUBLIC SERVICE COMPANY OF INDIANA, INC., AN INDIANA ITFM 9. CORPORATION, DATED 1/8/1990 RECORDED 8/21/1990 IN INSTRUMENT NO :90-6857. (EASEMENT DOES NOT APPLY TO SUBJECT PROPERTY.)

ITEM 10-14: (ORIGINAL DEVELOPMENT OF SUBJECT PROPERTY AND SURROUNDING PROPERTY.)

WOODSIDE BUSINESS CENTER 5TH REPLAT RECORDED 4/14/2009 IN BOOK R PAGE 202A. (CURRENT ITEM 15: PLAT AND LEGAL DESCRIPTION OF SUBJECT PROPERTY. AS SHOWN ON THIS PLAT.)

SITE INFORMATION

TAX PARCEL NUMBER: 03-85-10-440-000.401-021 03-85-10-440-000.400-02

03-85-15-110-000.701-02 03-85-10-440-000.401-021

PROPERTY OWNER: THE CHRISTOPHER STEPHEN CORP 6350 S. INWOOD DRIVE COLUMBUS, IN 47201

SOURCE OF TITLE: INST. #201300014113





SOUTH BEND. IN 46601 574.237.0464

T.J. BOOFTER **CIVIL ENGINEERS &** LAND SURVEYORS 207 W Spring St, New Albany, IN 47150

SURVEY

REV.	DATE	DESCRIPTION
Α	05.06.14	PRELIM ISSUE
В	05.22.14	LEASE AREA / ACCESS ESMT LOCATION
С	05.28.14	REMOVED PROPOSED UTILITY ESMT

SITE INFORMATION

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 **BARTHOLOMEW COUNTY**

HV863

POD NUMBER: 14-2529

DRAWN BY DAP

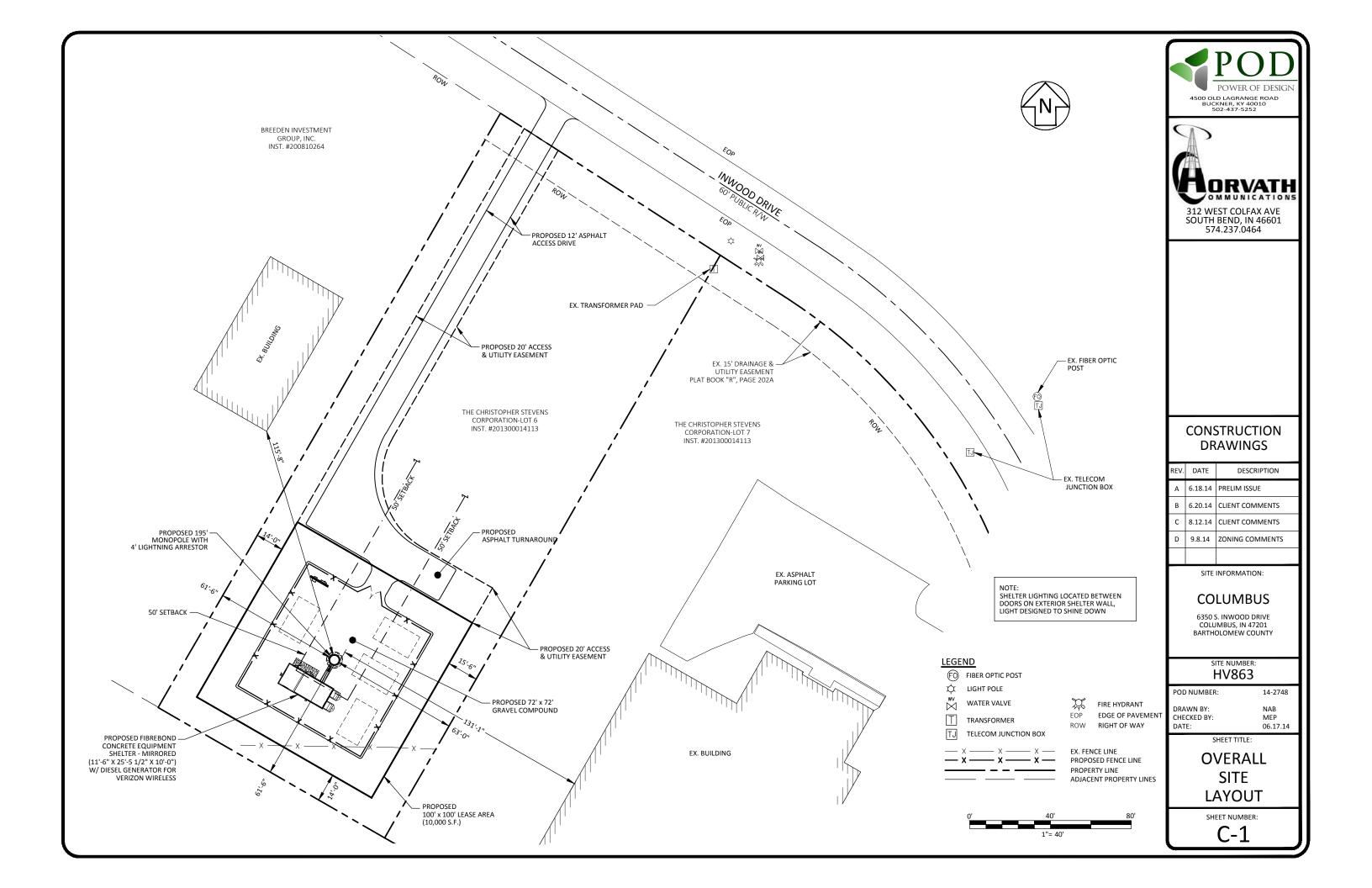
CHECKED BY: 05.06.14 SHEET TITLE

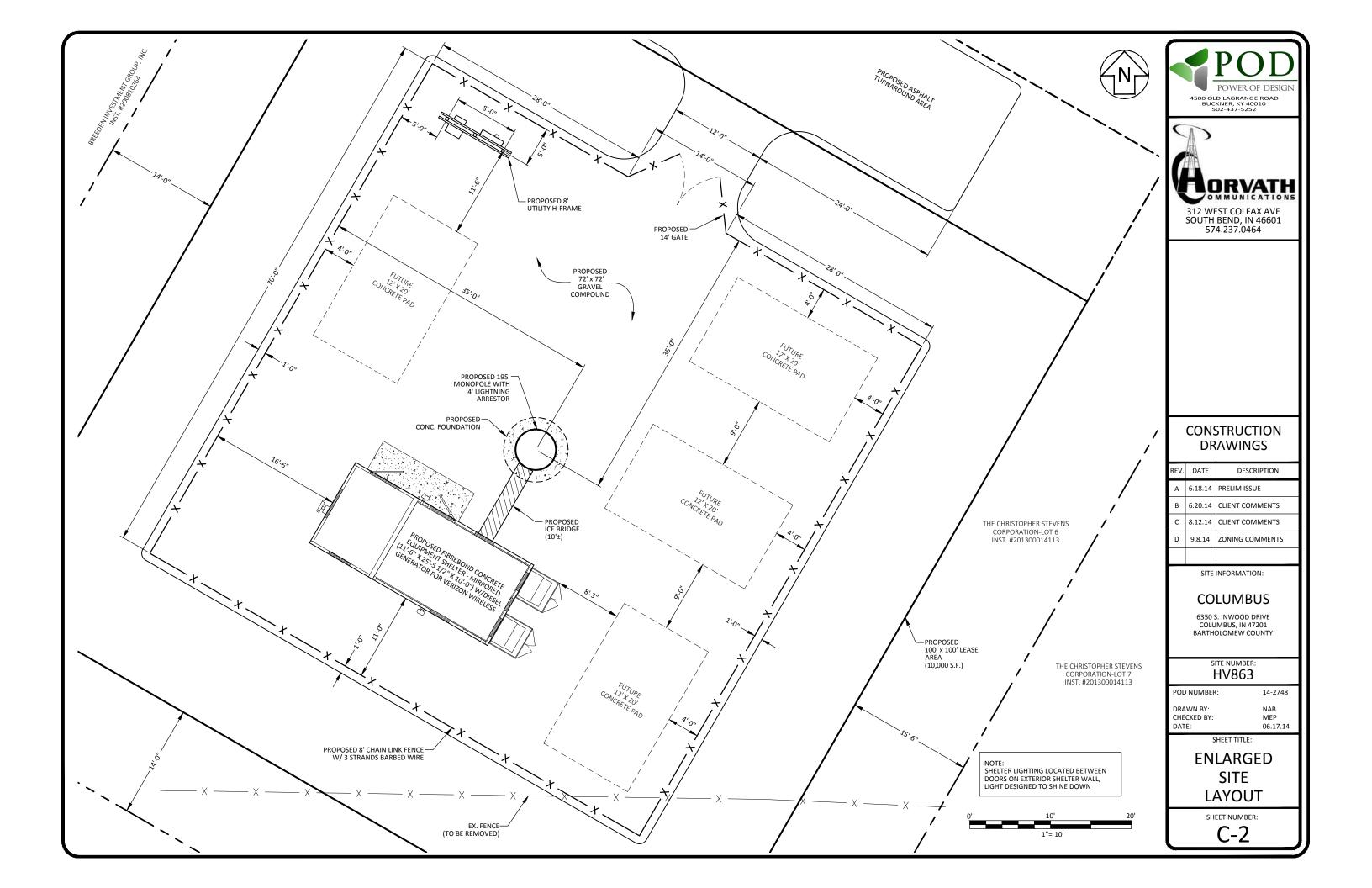
SITE

SURVEY

SHEET NUMBER:

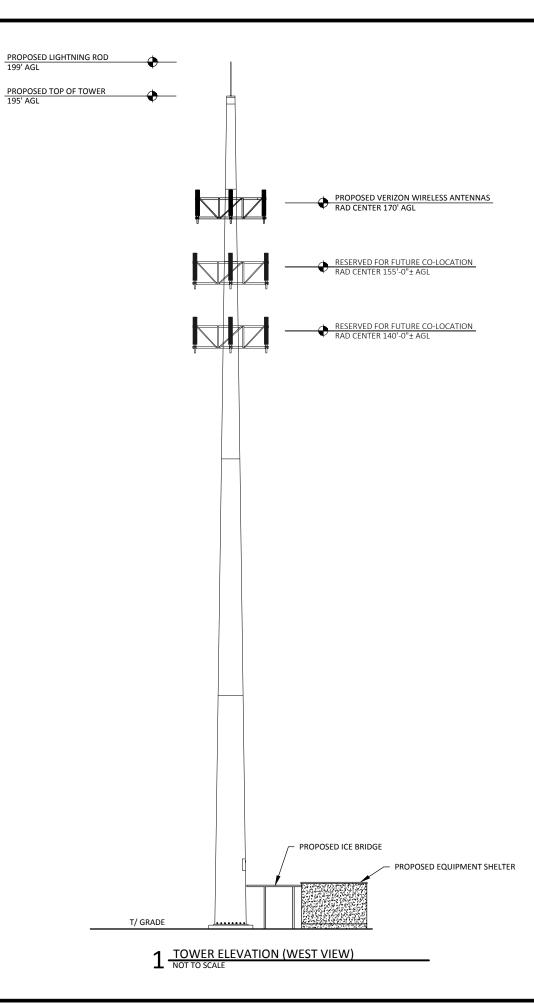
HOMAS J. BOOFTER, LS #S-0133





TOWER NOTES:

- THE PROPOSED TOWER, FOUNDATION, ANTENNA MOUNTS, AND ANTENNAS TO BE DESIGNED BY OTHERS.
- 2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
- 3. ADDITIONAL PROPOSED AND FUTURE ANTENNAS AND MOUNTS
- 4. TOWER WILL NOT BE LIT.







312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV	. DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER:

POD NUMBER: 14-2748

DRAWN BY: CHECKED BY: DATE: NAB MEP 06.17.14

SHEET TITLE:

TOWER ELEVATION

SHEET NUMBER:

C-3

	RF & Microwave Antennas											
Location	Service	Function	Antenna Make	Antenna Model	Gain	Height	Azimuth	M-Tilt	Var E-Tilt 700	Var E-Tilt 850	Var E-Tilt PCS	Var E-Tilt AWS
Α	3	Tx/Rx	ANDREW	LNX-6515DS-A1M	14.6	170	5	0	6			
В	4,5	Tx/Rx	ANDREW	HBXX-6517DS-A2M	16.8	170	5	0				4
С	2	Tx/Rx	ANDREW	HBXX-6517DS-A2M	16.8	170	5	0			4	
D	3	Tx/Rx	ANDREW	LNX-6515DS-A1M	14.6	170	5	0	6			
E												
F												
G	3	Tx/Rx	ANDREW	LNX-6515DS-A1M	14.6	170	150	0	4			
Н	4,5	Tx/Rx	ANDREW	HBXX-6517DS-A2M	16.9	170	150	0				3
1	2	Tx/Rx	ANDREW	HBXX-6517DS-A2M	16.9	170	150	0			3	
J	3	Tx/Rx	ANDREW	LNX-6515DS-A1M	14.6	170	150	0	4			
K												
L,												
		T./D.	AMPLIENCI	LED/00040D0000	45.4	470	000	0	0			
M	3	Tx/Rx	AMPHENOL	HTXC6318R000G	15.4	170	260	0	3			_
N	4,5	Tx/Rx	ANDREW	HBXX-6517DS-A2M	17.1	170	260	0			2	2
0 P	2	Tx/Rx Tx/Rx	ANDREW AMPHENOL	HBXX-6517DS-A2M HTXC6318R000G	17.1 15.4	170 170	260 260	0	3		2	
	J	TX/FX	AWIPHENUL	HI ACOS IORUUUG	15.4	170	200	U	3			
Q R												
K												
	Tower Mounted Equipment								Coax Li	ines		
Location	Service	Manuf.	Model	Count	Туре	Height	Service	Manuf.		del	Count	Length
A	3	Ericsson	RRUS 12 B13		RRH	170	2,3,4,5	Rosenberger	271	12xxx	3	TBD
		LIICOSOII	14100 12 010		TAIAT	110	2,0,7,0	resemberger	TIL-50	LANA	U	100

RRH

4-way Rx

RRH

4-way Rx

4-way Rx

OVP

RRH

RRH

4-way Rx

RRH

4-way Rx

4-way Rx

RRH

RRH

4-way Rx

RRH

4-way Rx

4-way rx

170

170

170

170

170

170

170

170

170

170

170

170

170

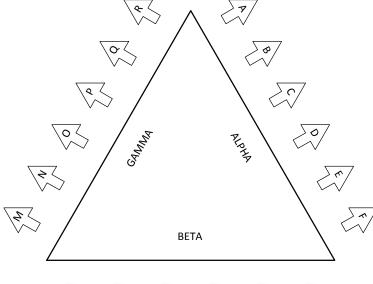
170

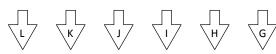
170

170

170

170





2 EQUIPMENT POSITION CHART NOT TO SCALE







312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER:

POD NUMBER: 14-2748

DRAWN BY: CHECKED BY:

DATE:

MEP 06.17.14

NAR

SHEET TITLE:

TOWER EQUIPMENT INFORMATION

SHEET NUMBER:

C-4

1 TOWER EQUIPMENT SCHEDULE NOT TO SCALE

4,5

4,5

3

4.5

4,5

4,5 4,5

D

G

Н

Ericsson

Ericsson

Ericsson

Ericsson

Westell

Rosenberge

Ericsson

Ericsson

Ericsson

Ericsson

Ericsson

Westell

Ericsson

Ericsson

Ericsson

Ericsson

Ericsson

RRUS 12 B4

RRUS A2 B4

RRUS 12 B2

RRUS A2 B2

RRUS A2 B13

RRUS 12 B13

RRUS 12 B4

RRUS A2 B4

RRUS 12 B2

RRUS A2 B2

RRUS A2 B13

RRUS 12 B13

RRUS 12 B4

RRUS A2 B4

RRUS 12 B2

RRUS A2 B2

RRUS A2 B13

IVIATERIAL LIST					
DESCRIPTION	FURNISHED BY	INSTALLED BY			
ANTENNA PIPE MOUNTS	CONTRACTOR	CONTRACTOR			
ICE BRIDGE HARDWARE	CONTRACTOR	CONTRACTOR			
GSIC CLOSURES	CONTRACTOR	CONTRACTOR			
TOWER BUSS BARS	TOWER VENDOR	CONTRACTOR			
ANTENNAS	VERIZON WIRELESS	CONTRACTOR			
RRHS & OVPS	VERIZON WIRELESS	CONTRACTOR			
JUMPERS	CONTRACTOR	CONTRACTOR			
COAX	VERIZON WIRELESS	CONTRACTOR			
GROUND KITS	CONTRACTOR	CONTRACTOR			
PPC CONNECTORS	CONTRACTOR	CONTRACTOR			
ENTRY PORT BOOTS & CAPS	CONTRACTOR	CONTRACTOR			
HANGER KITS	CONTRACTOR	CONTRACTOR			
DC BLOCKS	CONTRACTOR	CONTRACTOR			
DUPLEXORS	VERIZON WIRELESS	CONTRACTOR			
DIPLEXERS	VERIZON WIRELESS	CONTRACTOR			
COAX ATTACHMENT TO TOWER HARDWARE	CONTRACTOR	CONTRACTOR			

MATERIAL LIST

ANTENNA NOTES:

- 1. CONTRACTOR TO CALL PROJECT MANAGER TO SCHEDULE ANTENNA AND LINE SWEEP.
- 2. ANTENNAS SHALL BE DESIGNATED FROM RIGHT TO LEFT, FACING THE ASSEMBLY FROM THE GROUND, LEFT TO RIGHT FACING THE BACK OF THE ANTENNA.
- 3. THE OUTER MOST ANTENNAS ON EACH FACE SHALL BE DESIGNATED AS THE RECEIVE ANTENNAS. THE INNER ANTENNAS SHALL BE DESIGNATED AS THE TRANSMIT.
- 4. EACH TRANSMISSION LINE SHALL BE LABELED WITH BRASS "TOE TAGS", GRANGER PART NUMBER 1F035-8, STAMPED WITH 1/4"

 LETTERS / NUMBERS STAMPS, GRANGER PART NUMBER 3W639. THE LABELS SHALL BE ATTACHED WITH A SEMI-PERMANENT METHOD

 (I.E. BLACK UV RESISTANT CABLE TIES). THE TAGS SHALL BE PLACED SO AS NOT TO COME IN CONTACT WITH THE CONNECTOR ON THE

 LINE AND THE METAL OF THE TOWER. LINES SHALL BE LABELED AT THE TOP AND BOTTOM, AND OUTSIDE OF ENTRY PORT.
- 5. CONTRACTOR SHALL INSTALL INTERMITTENT COAX TIN PLATED GROUND BARS AT 75' INTERVALS STARTING FROM THE ANTENNA CENTERLINE DOWN ON SELF SUPPORT AND GUYED TOWERS.
- CONTRACTOR SHALL FIELD VERIFY THE EXACT TMA'S (IF THEY ARE REQUIRED) PER THE OPERATIONS MANAGER.
 COAXIAL CABLES TO BE SUPPORTED EVERY 3'-0" ON PLATFORM WITH STAINLESS STEEL HANGERS.
- 8. JUMPERS TO BE SUPPORTED EVERY 18" WITH STAINLESS STEEL HANGERS.
- 9. EACH COAX SHALL BE SUPPORTED WITH COLUMN GRIP (CHINESE FINGER GRIP) HUNG FROM A J-HOOK AT TOP OF TOWER (10' ABOVE FOR LATTICE TOWER).

NOTES:

- CONTRACTOR IS TO VERIFY THE ANTENNA LAYOUT WITH THE RF ENGINEER'S MOST RECENT RF DESIGN
- CONTRACTOR IS TO SET ALL AZIMUTHS OFF OF TRUE
 NORTH

SITE WORK GENERAL NOTES

- 1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION
- 2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RE-LOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AOUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
- 3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PER PROPOSED SITE OWNERS SPECIFICATIONS.
- 4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER DEBRIS SHALL BE REMOVED FROM THE SITE AND
- 5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE SHELTER OR EQUIPMENT PAD AND
- 6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW, OR ICE SHALL NOT
- 7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE
- 8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED, OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER, AND/OR LOCAL
- 9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, AND SEEDED. SEE CONSTRUCTION NOTES FOR FURTHER INSTRUCTIONS.
- 10. CONTRACTORS SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT

CONCRETE AND REINFORCING STEEL NOTES:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318 AND THE SPECIFICATION 330 FOR CAST-IN-PLACE
- 2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE OR

CONCRETE CAST AGAINST EARTH......3IN.

CONCRETE EXPOSED TO EARTH OR WEATHER:

#6 AND LARGER... #5 AND SMALLER AND WWF....1 1/2 IN.

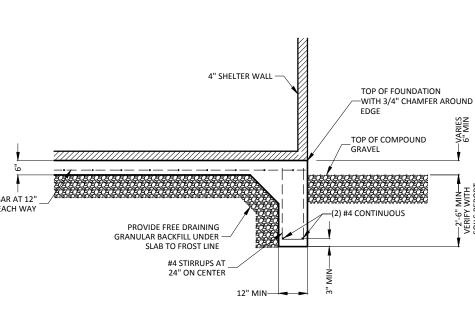
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

BEAMS AND COLUMNS.....1 1/2 IN

- 5. 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION
- 6. INSTALLATION OF CONCRETE EXPANSION / WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET / REDHEAD OR APPROVED EQUAL.

NOTES

30" DEPTH IS REQUIRED BETWEEN FINAL GRADE AND BOTTOM OF FOOTING, IF LOCAL FROST DEPTH IS GREATER THAN 30", A DEEPER FOOTING WILL BE REQUIRED.







SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION **DRAWINGS**

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

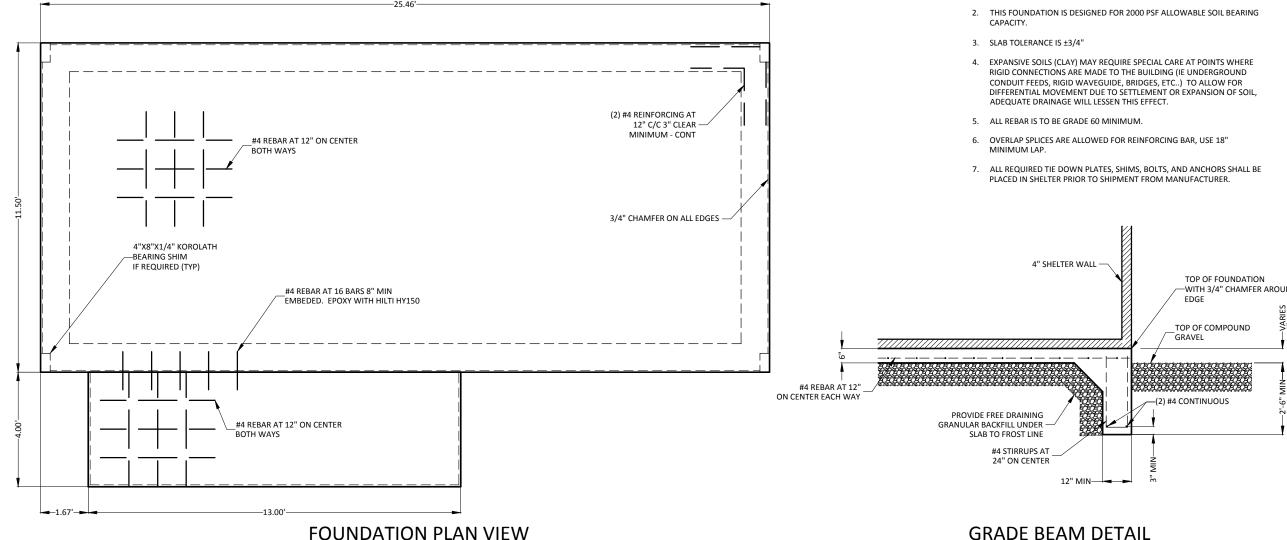
6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

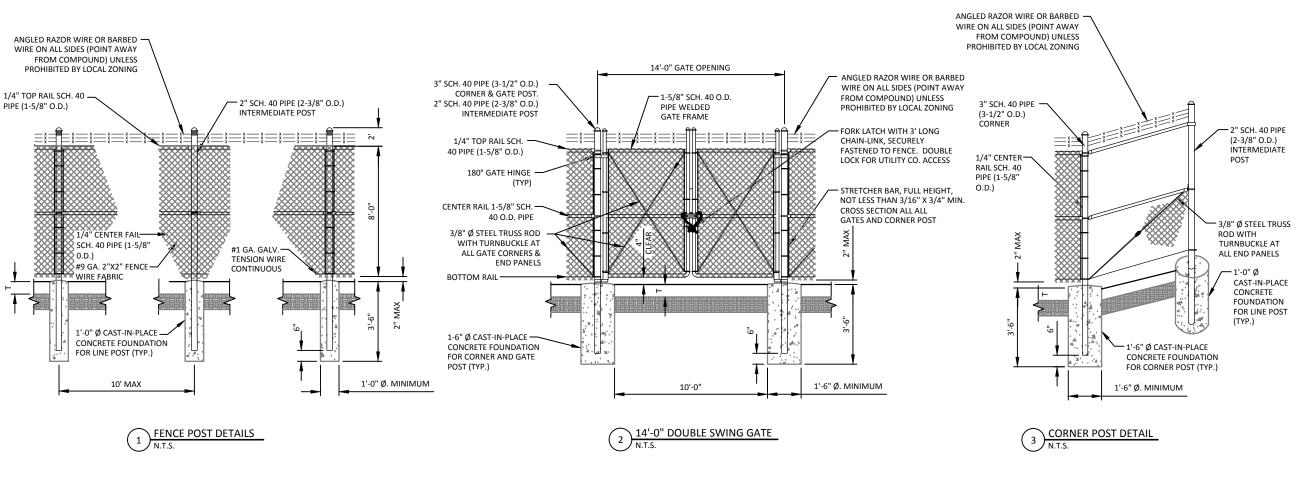
SITE NUMBER HV863

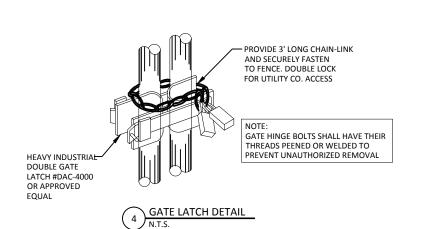
POD NUMBER: 14-2748 DRAWN BY NAR CHECKED BY: MEP DATE: 06.17.14

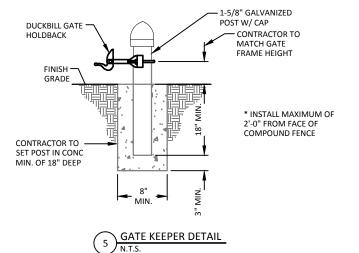
FOUNDATION DETAILS & NOTES

SHEET NUMBER









FENCING NOTES:

- 1. ALL STEEL MATERIAL SHALL BE HOT- DIPPED GALVANIZED AND CONFORM TO FEDERAL SPECIFICATION RR-F-191.
- 2. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL.
- 3. THE FENCE SHALL BE GROUNDED AS SHOWN IN ELECTRICAL DETAILS
- 4. ALL FENCING AND RELATED ASSEMBLIES SHALL BE GALVANIZED ZINC FINISH (FABRIC-ASTM A392-84 FRAME WORK-ASTM F669-81)
 5. ALL CONCRETE FOOTINGS SHALL BE 6. 1 BAG MIX 3000 PSI CONCRETE
- 6. ALL GATE FABRIC, POSTS, AND HARDWARE SHALL HAVE A GALVANIZED FINISH CONFORMING TO ASTM A153 OR 120/123

GENERAL NOTES:

1) G.C. IS RESPONSIBLE TO PAY AND SCHEDULE THIRD PARTY INSPECTIONS FOR BOTH TOWER AND BUILDING FOUNDATIONS. VERIZON WIRELESS TO RECEIVE COPIES AT CLOSE OUT.

COPIES OF THE REPORT ARE ISSUED TO THE CONTRACTOR FOR CONVENIENCE ONLY. THE REPORT IS NOT A PART OF THE CONTRACT DOCUMENTS. NEITHER THE OWNER NOR THE ENGINEER/ARCHITECT GUARANTEE THE ACCURACY OR VALIDITY OF THE DATA CONTAINED THEREIN. NOR DO THEY ASSUME ANY RESPONSIBILITY FOR THE CONTRACTOR'S USE OR INTERPRETATION OF THE DATA CONTAINED THEREIN

GEOTEXTILE PARAMETERS					
PROPERTY	MINIMUM VALUE (a)	TEST METHOD			
GRAB STRENGTH PUNCTURE STRENGTH BURST STRENGTH THAPEZOIDAL TEAR	180 LBS. 75 LBS. 290 LBS. 50 LBS.	ASTM D-4632-91 ASTM D-4833-88 ASTM-D-3796 ASTM-D-4571-87			
(a) ALL VALUES REPRESENT MINIMUM ROLL VALUES					

NOTES:

THE FABRIC SHOULD BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. INTERSECTIONS OF SHEETS MUST BE SEWN OR SUFFICIENTLY OVERLAPPED (AT LEAST 24 INCHES OR AS SPECIFIED BY THE MANUFACTURER). THE GEOTEXTILE SHEETS SHOULD ALSO BE PLACED TAUT TO REDUCE WRINKLES OR FOLDS. CARE MUST BE EXERCISED TO PREVENT PHYSICAL DAMAGE OF THE GEOTEXTILE PRIOR TO, DURING AND AFTER INSTALLATION. UTILITIES SHOULD BE INSTALLED BEFORE PLACING THE FABRIC.



CONSTRUCTION **DRAWINGS**

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 **BARTHOLOMEW COUNTY**

SITE NUMBER HV863

POD NUMBER: 14-2748 DRAWN BY NAR

MEP

06.17.14

CHECKED BY: DATE:

SHEET TITLE:

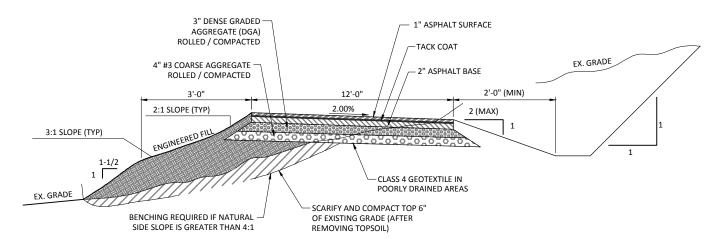
FENCE DETAILS & NOTES

SHEET NUMBER:

C-6

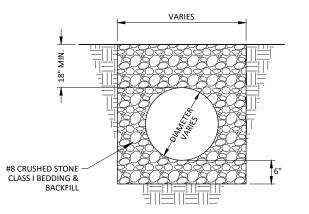
NOTES:

- 1. DENSE GRADED AGGREGATE AND #3 STONE SHALL BE COMPACTED IN TWO SEPARATE COURSES.
- 2. ASPHALT SHALL BE CLASS 1, TYPE A.
- 3. TACK COAT SHALL BE APPLIED AT THE RATE OF 0.1 GALLON PER SQUARE YARD WITH THE INSTALLATION OF SURFACE ASPHALT WHEN FINAL PAVING HAS BEEN DELAYED FROM BASE INSTALLATION. TACK COAT THE EDGE OF THE EXISTING ASPHALT TO ENSURE ADHESION BETWEEN THE PROPOSED AND FXISTING ASPHALT.
- 4. USE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS LATEST EDITION, UNLESS OTHERWISE SPECIFIED
- AN APPROVED JOINT SEALER, IN ACCORDANCE WITH INDIANA DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS LATEST EDITION, IS TO BE USED TO SEAL ALL JOINTS BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT.
- SAW CUT EXISTING PAVEMENT TO CREATE A SMOOTH UNDAMAGED EDGE AGAINST WHICH NEW PAVEMENT SHALL BE CONSTRUCTED.
- ALL EMBANKMENT BACKFILL AND SUBGRADE MATERIALS SHALL BE CONSTRUCTED AND COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AND A PLUS 2 OR MINUS 4 PERCENT OF THE OPTIMUM MOISTURE CONTENT.



ASPHALT ACCESS ROAD

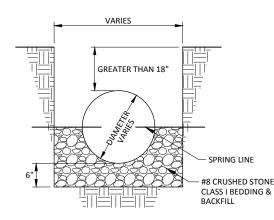
REMOVE TOPSOIL FROM SUBGRADE NOT TO SCALE



CRUSHED STONE ENCASEMENT DETAIL

NOT TO SCALE

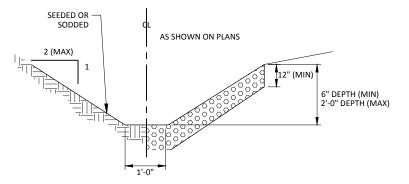
NOTE: ENCASEMENT USED WITH 18" OF COVER OR LESS.



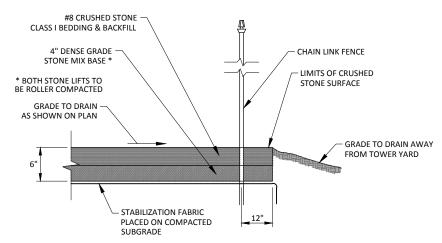
CRUSHED STONE CRADLE DETAIL

NOT TO SCALE

NOTE: CRADLE USED WITH MORE THAN 18" OF COVER.



FLAT-BOTTOM DITCH DETAIL NOT TO SCALE



COMPOUND AREA SURFACING

CULVERT NOTES

- 1. INSTALL CULVERTS WITH THE INLETS AT OR BELOW NATURAL GRADE.
- OUTLET THE CULVERTS AT OR BEYOND THE TOE OF THE SLOPE. EROSION PROTECTION, SUCH AS RIP-RAP IS OFTEN NECESSARY AT THE OUTLET OF CULVERTS. NEVER OUTLET A CULVERT FILL MATERIAL WITHOUT PROTECTIVE MEASURES.
- 3. CULVERT SIZES TO BE DETERMINED BY VERIZON WIRELESS OR VERIZON WIRELESS REPRESENTATIVE.





SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

HV863

POD NUMBER: 14-2748

DRAWN BY: NAB
CHECKED BY: MEP

SHEET TITLE:

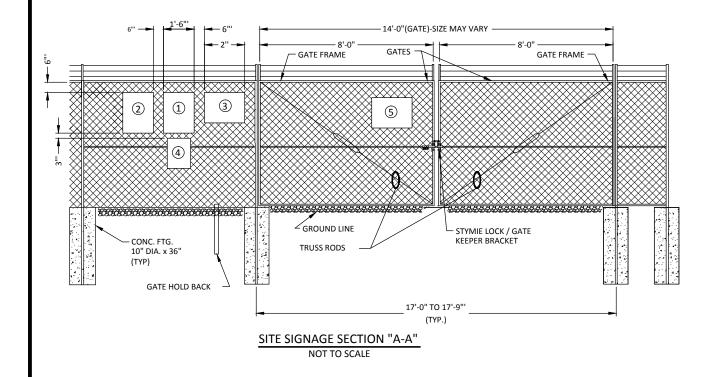
DATE:

CIVIL DETAILS

06.17.14

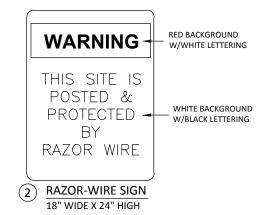
SHEET NUMBER:

C-7





NO-TRESSPASSING SIGN
18" WIDE X 24" HIGH



SITE ID# 000000

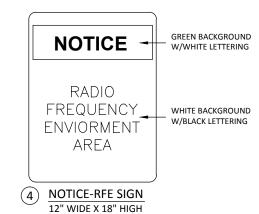
VERIFIED 911 STREET ADDRESS
CITY, STATE AND ZIP CODE
FOR LEASE INFORMATION CALL
1-877-788-7011
FOR 24 HOUR EMERGENCY SERVICE CALL
1-800-788-7011

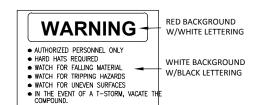
FCC TOWER REGISTRATION NO.
1234567

MARKETING/ID SIGN w/ FCC # IN 2"

LETTERING

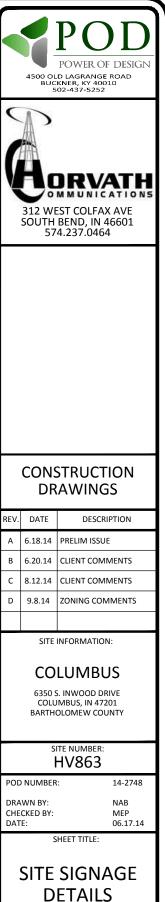
24" WIDE X 18" HIGH





5 CAUTION-HARD HAT CONSTRUCTION AREA AND TRIPPING HAZARDS

24" WIDE X 18" HIGH



SHEET NUMBER:

TYPICAL SIGNS AND SPECIFICATIONS

NOT TO SCALE

GENERAL NOTES

- DRAWINGS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE DIAGRAMMATIC ONLY. THE WORK INDICATED ON THE DRAWINGS SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO COMPLETE THE WORK. VERIFY ALL EQUIPMENT LOCATIONS WITH CONSTRUCTION MANGER.
- 2. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT, INCLUDING DEMOLITION, MECHANICAL AND ELECTRICAL INSTALLATIONS AND SHALL ADJUST BID ACCORDINGLY
- 3. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS ON THE JOB SITE AND CONFIRM THAT WORK AS INDICATED ON THE CONSTRUCTION DOCUMENTS (ALSO KNOWN AS CONSTRUCTION PLANS) CAN BE ACCOMPLISHED AS SHOWN BEFORE PROCEEDING
- NOTIFY PROJECT MANGER OF ANY MAJOR DISCREPANCY REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THIS CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK OR RELATED
- 5. INSTALL ALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- 6. CONTRACTOR SHALL VISIT JOB SITE TO REVIEW SCOPE OF WORK AND EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, MECHANICAL SERVICE, ELECTRICAL SERVICE AND OVERALL COORDINATION
- 7. ALL TELEPHONE / RADIO EQUIPMENT LAYOUT, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY CONSTRUCTION MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK AND CLEARANCE REQUIRED BY OTHERS RELATED TO SAID EQUIPMENT.
- ALL WORK PERFORMED AND MATERIALS SHALL MEET THE HIGHEST TRADE STANDARDS, AS A MINIMUM STANDARD, CONFORM WITH ALL APPLICABLE CODES REGULATIONS AND ORDINANCES HAVING IURISDICTION CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK
- 9. ELECTRICAL SYSTEMS SHALL BE INSTALLED PER N.E.C. AND IN ACCORDANCE WITH ALL APPLICABLE UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 10. CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE ANY SUB-CONTRACTORS OR WORKMEN ARE ON THE JOB SITE AND SHALL SUPERVISE AND DIRECT ALL WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT
- 11. CONTRACTOR SHALL PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
- 12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE (IBC) LATEST EDITION, ALONG WITH LATEST EDITION OF THE UPC, UMC, AND THE LATEST EDITION OF THE NEC. CONTRACTOR SHALL PROTECT ALL EXISTING FINISHES THAT ARE TO REMAIN. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION.
- 13. SEAL ALL PENETRATIONS THOUGH FIRE RATED AREAS WITH U.L. LISTED OR F.M. APPROVED MATERIALS. DETAILS AND SCHEMATICS PROPOSE TO SHOW END RESULT OF THE DESIGN
- 14. MINOR MODIFICATIONS MAY DEEM TO BE NECESSARY TO SUIT JOB CONDITIONS AND DIMENSIONS, SUCH MODIFICATIONS SHALL BE INCLUDED
- 15 VERIEY ALL FINAL FOLLIPMENT LOCATIONS WITH OWNER'S REPRESENTATIVE
- 16. DIMENSIONS ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED.
- 17. CLEANUP AND SAFETY: KEEP PROJECT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE ALL EQUIPMENT NOT SPECIFIED TO REMAIN THE PROPERTY OF THE OWNER. LEAVE PREMISES IN A VACUUM AND BROOM CLEAN CONDITION; FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SYSTEMS EQUIPMENT IN A CLEAN WORKING ORDER UNTIL ACCEPTANCE OF THE PROJECT BY PROJECT MANAGER.
- 18. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. THIS WILL BE DONE AFTER THE SITE HAS BEEN AWARDED THE FINAL INSPECTION. A MINIMUM OF TWO (2) COPIES OF REDLINED DRAWINGS WILL BE PROVIDED TO PROJECT MANAGER
- 19. GENERAL CONTRACTOR IS RESPONSIBLE FOR CLEANING AND WAXING SHELTER FLOORS AFTER ALL EQUIPMENT HAS BEEN INSTALLED.
- 20. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A TRASH RECEPTACLE AND A PORTABLE TOILET AT THE SITE FOR THE DURATION OF
- 21. THE PROPOSED SHELTER SHALL NOT BE USED FOR STORAGE OF TOOLS, EQUIPMENT, ETC., BY ANY CONTRACTORS OR SUB-CONTRACTORS.
- 22. THE CONTRACTOR WILL BE RESPONSIBLE FOR PICKING UP TRASH DAILY AND REMOVING ITS ACCUMULATION FROM THE CONSTRUCTION SITE. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A TRASH RECEPTACLE TO BE ON SITE FROM THE START OF CONSTRUCTION UNTIL RELEASED
- 23. CONTRACTOR SHALL PROVIDE 90 DAY WEED CONTROL ON THE INSIDE OF COMPOUND ONLY, UTILIZING GROUND STERILANT OF CHOICE SUCH AS PRAMITAL 25E WITH SAHARA. THIS INSTRUCTION APPLIES TO ALL BUILDS (RAW LAND AND CO-LOCATION). CLOSEOUT BINDER

CONSTRUCTION NOTES:

- CONFIRM SURVEY STAKES AND SET ELEVATIONS PRIOR TO ANY CONSTRUCTION.
- THE COMPLETE ROAD AND SITE AREA WILL BE CLEANED AND GRUBBED PRIOR TO FOUNDATION CONSTRUCTION OR PLACEMENT OF BACKFILL OR SUB-BASE MATERIAL
- PRIOR TO OTHER EXCAVATION AND CONSTRUCTION EFFORTS GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX (6) INCHES BELOW ORIGINAL
- UNLESS OTHERWISE INSTRUCTED BY PROJECT MANAGER TRANSPORT ALL REMOVED TREES, BRUSH, AND DEBRIS FORM THE PROPERTY TO AN AUTHORIZED LANDFILL
- CONSTRUCT TEMPORARY CONSTRUCTION ZONE ACCESS DRIVE
- THE SITE AREA WILL BE BROUGHT TO SUB-BASE COURSE ELEVATION AND THE ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING
- 7. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.

SOIL STERILIZERS: TOTAL KILL PRODUCT 910 - EPA 10292-7

AMBUSH HERBICIDE - EPA REGISTERED PHASAR CORPORATION FRAMAR INDUSTRIAL PRODUCTS

P.O. BOX 5123 1435 MORRIS AVENUE DEARBORN, MI 48128 TEL 313 563-8000 UNION, NJ 07083 TEL 800 528-4924

- 8. SOIL STERILIZER SHALL BE EPA REGISTERED OF LIQUID COMPOSITION AND OF PRE EMERGENCE DESIGN AND APPLIED IN ACCORDANCE WITH
- 9. GRADE, SEED, FERTILIZE, AND MULCH DISTURBED AREAS IMMEDIATELY AFTER BRINGING SITE AND ACCESS ROAD TO BASE COURSE ELEVATION, WATER TO INSURE GROWTH
- 10. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY PROJECT MANAGER
- 11. AFTER COMPLETION OF CONSTRUCTION BUT PRIOR TO THE FINAL PUNCH LIST INSPECTION, APPLY THREE (3) INCHES OF 3/4 INCH CRUSHED AND WASHED STONE (OR MATCH EXISTING ON CO-LOCATED SITES) TO ALL GRAVELED AREAS.
- 12. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO THE STONE SURFACES.
- 13. SOIL STERILIZATION APPLICATION SHALL GUARANTEE VEGETATION FREE ROAD AND SITE AREA FOR ONE YEAR FROM DATE OF FINAL
- 14. DISTURBED AREA WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
- 15. ROAD AND SITE MATERIALS AND CONSTRUCTION PRACTICES SHALL CONFORM TO STATE TRANSPORTATION CABINET, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
- 16. THE CONTRACTOR SHALL REPAIR ALL AREAS DAMAGED DURING CONSTRUCTION, BACK AS CLOSE TO ORIGINAL AS POSSIBLE
- 17. IF UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED THEY SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND WHERE POSSIBLE STABILIZED WITH MIRAFI-600X FABRIC OR FOUIVALENT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL
- 18. ELEVATIONS FOR SITE AND ACCESS ROAD ARE TO BE CALCULATED FROM FINISHED GRADES OR SLOPES INDICATED.
- 19. THE ACCESS ROAD SHALL BE BROUGHT TO BASE COURSE ELEVATION PRIOR TO FOUNDATION CONSTRUCTION TO PERMIT USE, COMPACTION. AND OBSERVATION DURING CONSTRUCTION OF THE SITE.
- 20. AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
- 21. THE CONTRACT SHALL BE ASSUMED TO INCLUDE GRADING, BANKING, DITCHING AND UNLESS OTHERWISE INDICATED, COVERING TWO INCHES OF SURFACE COURSE. ALL ROADS OR ROUTES UTILIZED FOR ACCESS TO THE SITE COMMENCING AT THE POINT OF INTERSECTION WITH TH NEAREST PUBLIC THOROUGHFARE
- 22. WHEN IMPROVING AN EXISTING ACCESS ROAD, GRADE THE EXISTING ROAD TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE
- 23. PLACE FILL OR STONE IN SIX INCH MAXIMUM LIFT AND COMPACT REFORE PLACING NEXT LIFT.
- 24. THE FINISH GRADE, INCLUDING TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE FOOT BEYOND THE SITE FENCE AND SHALL COVER THE AREA AS INDICATED
- 25. RIPRAP SHALL BE APPLIED TO THE SIDES OF DITCHES OR DRAINAGE SWALES
- 26. RIPRAP ENTIRE DITCH FOR SIX FEET IN ALL DIRECTIONS AT CULVERT OPENINGS
- 27. SEED FERTILIZER AND STRAW COVER SHALL BE APPLIED TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES NOT OTHERWISE





SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION **DRAWINGS**

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER HV863

POD NUMBER 14-2748

NAR

MFP

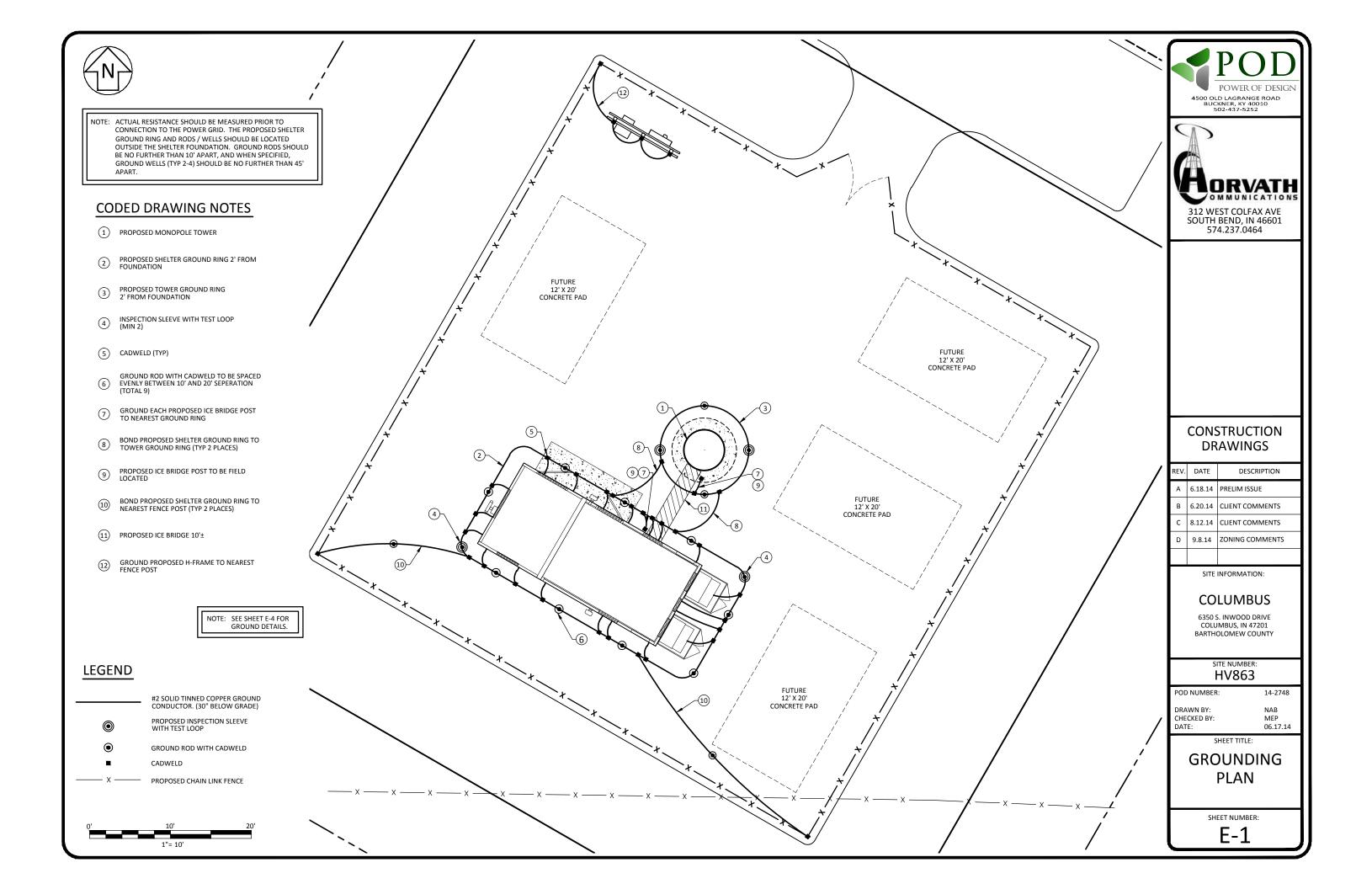
06.17.14

DRAWN BY CHECKED BY DATF:

SHEET TITLE:

NOTES

SHEET NUMBER:

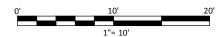




CODED DRAWING NOTES

- (1) 4" & (1) 1-1/4" PVC ELECTRIC CONDUIT EACH W/ DETECTABLE PULL TAPE TO EQUIPMENT SHELTER (74±)
- (1) 4" PVC FIBER CONDUIT W/ DETECTABLE PULL TAPE TO EQUIPMENT SHELTER (86±)
- 3 PROPOSED MONOPOLE TOWER
- PROPOSED ICE BRIDGE 10'±
- 5 PROPOSED 8' UTILITY H-FRAME

NOTE: CONTRACTOR TO HAND EXCAVATE UTILITY TRENCH IN AREAS WHERE EXISTING UTILITIES ARE PRESENT.

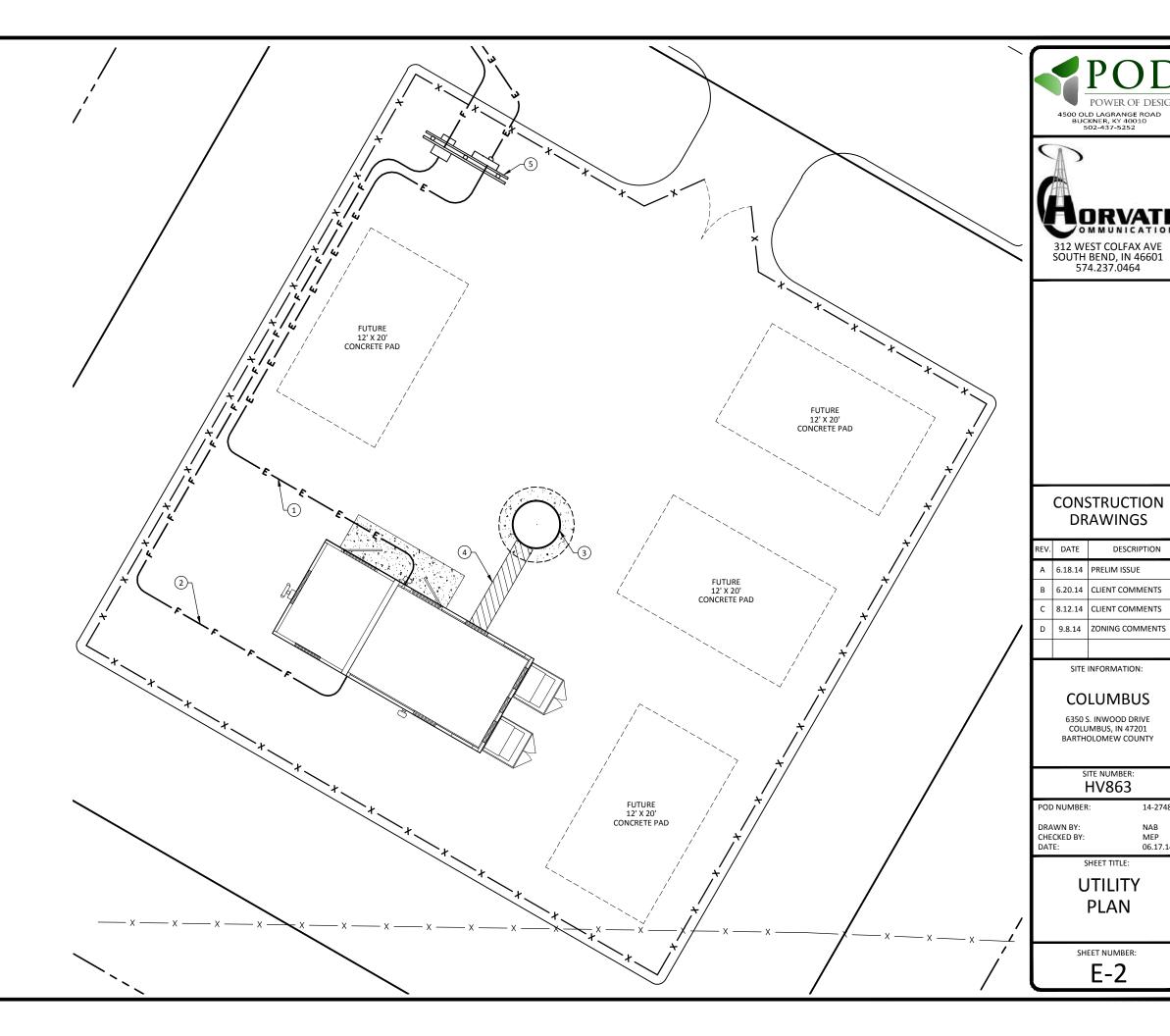


LEGEND

PROPOSED UNDERGROUND ELECTRIC

PROPOSED UNDERGROUND FIBER

PROPOSED CHAIN LINK FENCE



DESCRIPTION

SITE NUMBER: HV863

SHEET TITLE: UTILITY

PLAN

SHEET NUMBER:

14-2748 NAB MEP

06.17.14

NOTES

- 1. EACH BUILDING / EQUIPMENT PAD GROUNDING LAYOUT IS TO COMPLY WITH PROPOSED SHELTER OWNER AND SITE OWNERS
- 2. ALL GROUNDING DETAILS TO FLOW CLOCKWISE. (AS SHOWN)
- 3. CONTACT CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS PERSONNEL PRIOR TO BACKFILLING GROUNDING INSTALLATION.
- 4. PLACE TEST PORTS AT OPPOSITE ENDS OF SHELTER.

BARBED WIRE

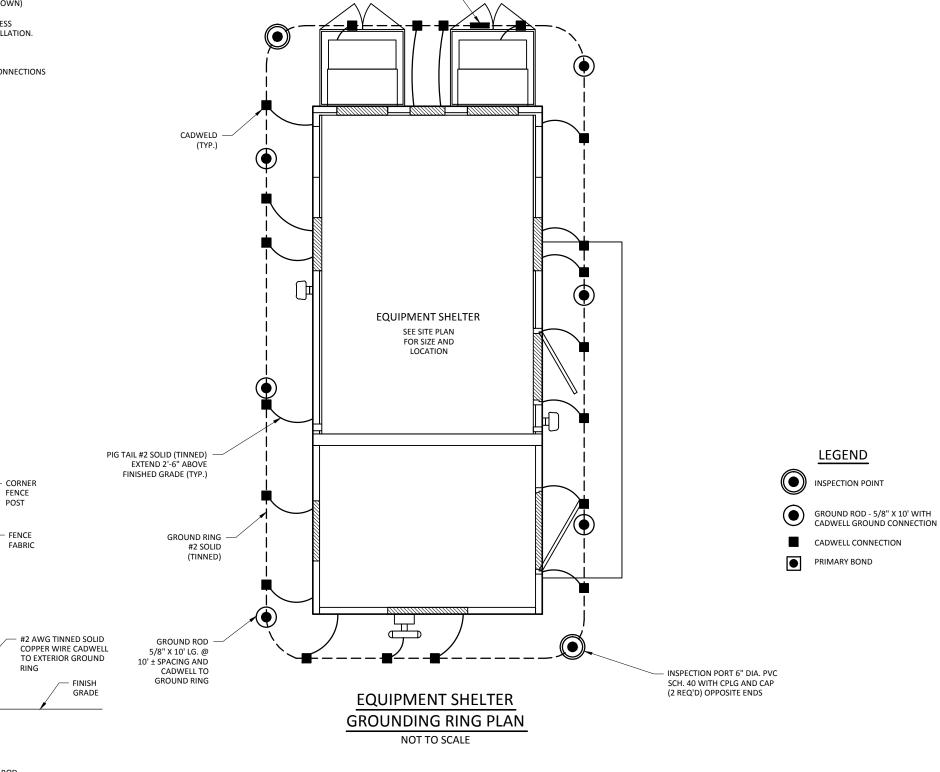
#2 AWG TINNED SOLID COPPER WIRE

POST

GROUND ROD

FENCE GROUNDING DETAIL NOT TO SCALE

5. MINIMUM 3 FOOT SPACING BETWEEN THE GROUND CONNECTIONS TO THE MAIN TOWER GROUND RING.



SPLICE (AS REQUIRED) -





312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER: HV863

NAB

MEP

06.17.14

14-2748 POD NUMBER:

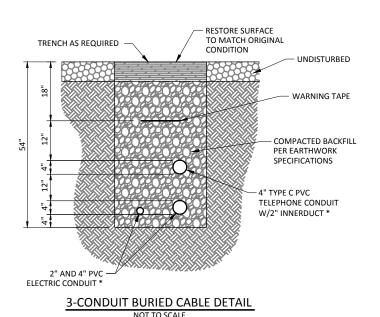
DRAWN BY CHECKED BY: DATE:

SHEET TITLE:

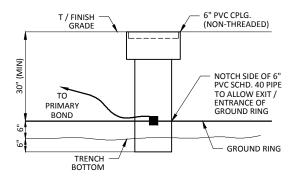
SHELTER GROUNDING PLAN

SHEET NUMBER:

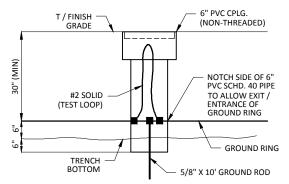
E-3



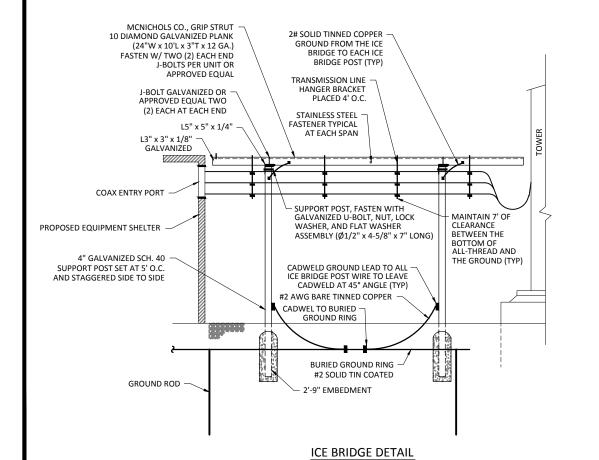
* SEPERATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY CO. REQUIREMENT. SEE CONDUIT(S) SIZE APPLICABLE IN THE POWER AND TELCO RISER DIAGRAM, NUMBER AND SIZES OF POWER AND TELCO CONDUITS MUST MEET ALL NEC AND UTILITY COMPANY REQUIREMENTS.

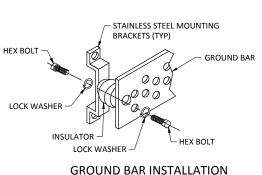


PRIMARY BOND W/ INSPECTION SLEEVE DETAIL NOT TO SCALE



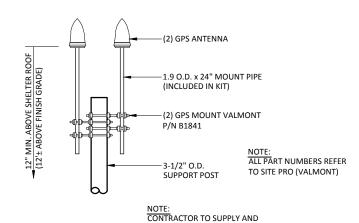
INSPECTION SLEEVE WITH TEST LOOP DETAIL - 2 REQUIRED





GROUND BAR INSTALLATION

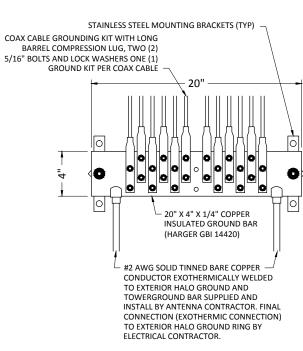
NOT TO SCALE



INSTALL GPS, GPS MOUNT,

CABLE, CONNECTORS, ETC

GPS MOUNT DETAIL NOT TO SCALE



TOWER GROUND BAR (TGB)

NOT TO SCALE





312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION	
Α	6.18.14	PRELIM ISSUE	
В	6.20.14	CLIENT COMMENTS	
С	8.12.14	CLIENT COMMENTS	
D	9.8.14	ZONING COMMENTS	

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER HV863

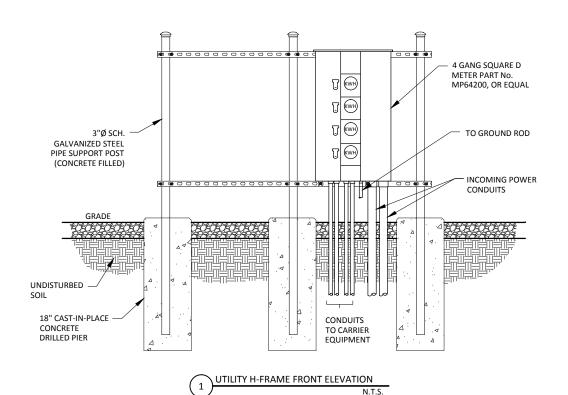
POD NUMBER: 14-2748 DRAWN BY NAR

CHECKED BY: MEP DATE: 06.17.14

SHEET TITLE:

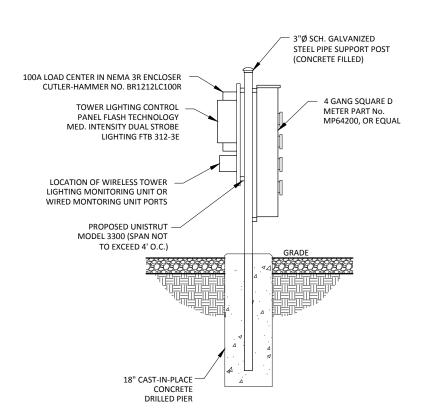
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:



CUTLER-HAMMER NO. BR1212LC100R AND FACE NORTH LOCATION OF WIRELESS TOWER 3/4" PVC LIGHTING MONITORING UNIT OR WIRED MONTORING UNIT PORTS VERTICAL UNISTRUTS TOWER LIGHTING CONTROL PANEL FLASH TECHNOLOGY 3/4" PVC NIPPLE TO CONTROL GFCI — PANEL ENCLOSURE RECEPTACLE IN 6" X 6" J-BOX NEMA 3R W.P. ENCLOSURE HURRELL 2" PVC CONDUIT NO. GF-5362, OR TO TOWER LIGHTS EQUAL GRADE MULTI-METER MODEL AND UTILITY H-FRAME BACK ELEVATION MAKE WITH LOCAL UTILITY N.T.S.

100A LOAD CENTER IN NEMA 3R ENCLOSER -



UTILITY H-FRAME SIDE ELEVATION

4'-0" TOWER LIGHTING LOCATION OF CONTROL PANEL WIRELESS TOWER FLASH TECHNOLOGY LIGHTING MONITORING UNIT MONITORING PORTS a 100A LOAD CENTER IN UTILITY H-FRAME PLAN 4 GANG SQUARE D NEMA 3R ENCLOSER METER PART No. CUTLER-HAMMER MP64200, OR EQUAL NO. BR1212LC100R

> 48 HOURS PRIOR TO DIGGING, CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES TO LOCATE ALL UNDERGROUND UTILITIES

MT-6503 PHOTOCELL MOUNT

MOUNT 6" ABOVE POST





312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER HV863

POD NUMBER: 14-2748

DRAWN BY CHECKED BY: DATE:

NAR MEP 06.17.14

SHEET TITLE:

H-FRAME **DETAILS**

SHEET NUMBER:

E-5



VERIFY COMPLIANCE OF

COMPANY PRIOR TO INSTALLATION.

ELECTRICAL NOTES

- THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE
- THE NEUTRAL IS TO BE GROUNDED AT THE METER MAIN ONLY
- THE TEMPERATURE RATING ASSOCIATED WITH THE AMPACITY OF A CONDUCTOR SHALL BE SO SELECTED AND COORDINATED AS TO NOT EXCEED THE LOWEST TEMPERATURE RATING OF ANY CONNECTED TERMINATION, CONDUCTOR, OR DEVICE; REFER TO TABLE 'A", AND THE N.E.C. ARTICLE 310.
- ALL ENCLOSURES CONTAINING THE SERVICE CONDUCTORS, SERVICE RACEWAY, CABLE ARMOR, BOXES, FITTINGS, AND CABINETS MUST BE EFFECTIVELY BONDED TOGETHER.
- EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY LABELED WITH ENGRAVED PLASTIC LABELS FOR EACH PANELBOARD, PULL BOX, J-BOX, SWITCH BOX, ETC. IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT

TERMINATI	ON RATING	CONDUCTOR INSULATION RATING		
	60 DEGREES C	75 DEGREES C	90 DEGREES C	
60 DEGREES C	ОК	OK AT 60 DEGREES C AMPACITY	OK AT 60 DEGREES C AMPACITY	
75 DEGREES C	NO	ОК	OK AT 75 DEGREES C AMPACITY	
60/75 DEGREES C	ОК	OK 60 OR 75 DEGREES C AMPACITY	OK 60 OR 75 DEGREES C AMPACITY	
90 DEGREES C	NO	NO	OK ONLY IF EQUIPMENT HAS 90° C RATING	

MATERIALS, ELECTRICAL WIRING AND RACEWAYS

- ALL CIRCUIT BREAKERS, FUSES, CONDUCTORS AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT TO WHICH THEY MAY BE SUBJECTED AND A MINIMUM OF 10,000 AIC RATING UNLESS SPECIFIED OTHERWISE, OR
- PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS WEATHERPROOF RECEPTACLES SHALL HAVE "WPD" 8-INCH LIFT COVER
- METER SOCKET AMPERAGE, VOLTAGE AND NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS AND MANUFACTURED BY SQUARE "D" COMPANY OR APPROVED EQUAL.
- INSTALLATION OF RIGID METAL CONDUIT (RMC) SHALL COMPLY WITH APPLICABLE PROVISION OF NATIONAL ELECTRICAL CODE (N.E.C.) ARTICLES 300 & 346 AND SHALL BE "UL" APPROVED.
- INSTALLATION OF ELECTRICAL METALLIC TUBING (EMT) SHALL COMPLY WITH APPLICABLE PROVISION OF N.E.C. ARTICLES 300 & 348 AND SHALL BE "UL" APPROVED.
- INSTALLATION OF INTERMEDIATE METAL CONDUIT (IMC) SHALL COMPLY WITH APPLICABLE PROVISION OF N.E.C. ARTICLES
- PVC CONDUIT SHALL BE SCHEDULE 40 HIGH IMPACT POLYVINYL CHLORIDE AND SHALL BE USED WITH UNTHREADED SOLVENT CEMENT PVC CONDUIT FITTINGS. COUPLINGS SHALL HAVE A CENTER STOP TO TYPE ENSURE PROPER SEATING. CONDUIT SHALL BE MANUFACTURER BY CARLON OR ACCEPTABLE EQUAL SHALL BE IN COMPLIANCE WITH N.E.C. ARTICLE 300 & 347 AND SHALL BE "UL" APPROVED.
 - 1. ALL PVC **BELOW** GRADE SHALL BE SCHEDULE 40 HIGH IMPACT POLYVINYL CHLORIDE
 - 2. ALL PVC ABOVE GRADE SHALL BE SCHEDULE 80 HIGH IMPACT POLYVINYL CHLORIDE
- 8 ALL WIRING MUST BE INSTALLED IN CONDUIT LINLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER INC. AND
- ALL WIRING SHALL BE COPPER TYPE AND IN ACCORDANCE WITH THE N.E.C. OR AS INDICATED ON DRAWINGS.
- 10. ALL ELECTRICAL EQUIPMENT SHALL BE NEW, SQUARE D (or APPROVED EQUAL) RATED NEMA 3R AND POWDER COAT PAINTED, WITH THE SIZE AS SPECIFIED AND IN ACCORDANCE WITH THE N.E.C. UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL RACEWAYS SHALL BE NEW, SQUARE D (or APPROVED EQUAL) RATED NEMA 3R, AND POWDER COAT OR
- 11. JUNCTION BOXES OR PULL BOXES SHALL MEET NATIONAL ELECTRICAL CODE STANDARDS AND AS APPROVED FOR
- 12. THE RACEWAY AND WIRING INSTALLATION SHALL BE GROUNDED PERMANENTLY AND EFFECTIVELY IN ACCORDANCE WITH
- 13. THE CONTRACTOR SHALL BE AWARE THAT ALL STATE AND LOCAL CODES SHALL APPLY TO THIS INSTALLATION AND MUST
- 14. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE SQUARE "D" (OR APPROVED EQUAL) GRAY POWDER COAT PAINTED NEMA 3R AND SHALL BE COATED LIGHTLY WITH A CLEAR COAT LACQUER SPRAY; EXCEPT STAINLESS STEEL EQUIPMENT.
- 15. AREAS OF APPLICATION FOR PULL BOX(FCA243624FF4xx) WOULD IN LOCATION SUCH AS DRIVE WAYS, PARKING LOTS, AND INSIDE OF OR OUTSIDE OF COMPOUND

SCOPE OF WORK

- THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL WIRING AND EQUIPMENT UNLESS OTHERWISE INDICATED. MAIN COMPONENTS ARE AS FOLLOWS:
- ONE SET OF COMPLETED ELECTRICAL "AS INSTALLED" OR "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE JOB SHOWING ACTUAL DIMENSIONS, ROUTING AND CIRCUITS SHALL BE PROVIDED TO THE PROJECT COORDINATOR. ALL BROCHURES, OPERATING MANUALS, CATALOGS SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE PROJECT COORDINATOR AT JOB COMPLETION
- PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF FLECTRICAL WORK
- UPON COMPLETION OF WORK, CONDUIT CONTINUITY, SHORT CIRCUIT, AND GROUNDING FALL POTENTIAL TEST WILL BE MADE FOR APPROVAL AND SUBMIT TEST REPORTS TO THE PROJECT COORDINATOR.
- CONTRACTOR SHALL CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE IN A COMPLETE AND UNDAMAGED CONDITIONS.
- THE COMPLETED JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF SITE ACCEPTANCE BY THE PROJECT COORDINATOR. ANY WORK MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AND AT THE EXPENSE OF THE CONTRACTOR.
- 7. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE ELECTRICAL EQUIPMENT PROVIDED BY
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATING SYSTEM ENERGIZED THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL
- 10. CONTRACTOR SHALL OBTAIN ALL NECESSARY BUILDING AND / OR ELECTRIC PERMITS INSPECTIONS AND APPROVALS. AND PAY ALL REQUIRED FEES PLIRSUANT TO THE WORK
- 11. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE (N.E.C.) AND ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES. ALL COMPONENTS SHALL BE "UL" APPROVED
- 12. CONTRACTOR SHALL BEFORE SUBMITTING THEIR BID. VISIT THE PROJECT SITE AND BECOME FAMILIAR WITH THE CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM.
- 13. EXACT LOCATION OF ALL EQUIPMENT SHALL BE COORDINATED WITH THE CCUSA AND
- 14. CONTRACTOR SHALL PROVIDE ALL VERIFICATION OBSERVATION TESTS AND EXAMINE ALL WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION, CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT COORDINATOR LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES
- 15. ALL MATERIALS AND FOUIPMENT SHALL BE NEW AND IN SAFE CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT (SEE NOTE 14 FOR EXCEPTIONS). MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "UL" LISTED.
- 16. ALL ELECTRICAL EQUIPMENT IS SPECIFIED AS **SQUARE "D"** BRAND, SUBSTITUTION SHALL ONLY BE MADE WITH THE APPROVAL OF CCUSA. THE CONTRACTOR SHALL SUBMIT DETAILS OF PROPOSED MATERIALS, REASON FOR CHANGE AND CHANGE IN CONTRACT

GROUNDING BAR NOTES:

- THE SIZE OF THE GROUND BARS INSTALLED ON TOWERS SHALL BE 1/4" THICK, 4" WIDE, LENGTH AS REQUIRED. TOP OF TOWER BARS MAY BE SMALLER, BUT MUST PROVIDE FOR FULL POTENTIAL OF FUTURE CONNECTIONS
- THE LOWEST POINT OF THE GROUND BAR AT THE BOTTOM OF THE VERTICAL RUN SHOULD BE APPROXIMATELY ONE TO TWO FEET ABOVE THE WAVEGUIDE BRIDGE ICE SHIELD. TWO FEET IS THE MAXIMUM HEIGHT. THIS GROUND BAR SHOULD EXTEND PROXIMATELY 6" BEYOND THE TOWER LEG TO FACILITATE WIRE ROUTING
- A MIDDLE OR INTERMEDIATE GROUND BAR WILL BE REQUIRED ON TRANSMISSION LINES GREATER THAN 200 FEET IN OVERALL LENGTH OR WHEN MICROWAVE IS PRESENT.
- ALL TOWER TOP GROUND BARS SHALL BE BOLTED TO THE WAVEGUIDE LADDER OR TOWER LEGS, DEPENDING ON LOCATION WITH APPROVED GROUNDING CLAMPS. NO ANGLE ADAPTERS OR ROUND MEMBER CLAMPS ALLOWED.
- THE BOTTOM GROUND BAR SHALL BE BONDED WITH TWO NO. 2 SOLID, TINNED, COPPER WIRE TO THE TOWER GROUND RING USING THE EXOTHERMAL WELD PROCESS. THE LEAD MUST RUN AS DIRECT AND STRAIGHT AS POSSIBLE IN 3/4" NON-METALLIC FLEX. SHOULD EXCESSIVE FOUNDATION HEIGHT REQUIRE GROUND BAR INSTALLATION ABOVE 10-12 FEET, THIS CONNECTION MAY BE MADE DIRECTLY TO THE TOWER. THE FIFLD MANAGER MUST APPROVE THE ALTERNATIVE
- THE MAIN REFERENCE GROUND BAR (MRGB) SHALL BE BONDED 6" IN FROM END WITH NO. 2 SOLID, TINNED COPPER WIRE TO THE GROUND RING SYSTEM USING MECHANICAL
- THIS GROUND BAR / WELLS SHALL BE MOUNTED AND SUPPORTED FROM THE WAVEGUIDE ICE BRIDGE APPROXIMATELY 3 FEET FROM EQUIPMENT OR SHELTER AND BELOW THE LOWEST SET OF TRANSMISSION LINES
- 8. ALL EXTERIOR TRANSMISSION LINE GROUNDS HAVE INSULATED NO. 6 STRANDED COPPER CONDUCTORS WITH TWO HOLE COMPRESSION LUGS. GROUND CONDUCTORS MUST ALWAYS FALL DOWNWARD TO THE GROUND BAR CONNECTION.
- THE GROUND BARS MUST BE CLEANED TO REMOVE ANY OXIDATION. PAINT OR OTHER FOREIGN SUBSTANCES. THE POINTS OF CONNECTION MUST BE COATED WITH A CONDUCTIVE. ANTI-OXIDANTION MATERIAL AFTER THE CONNECTIONS ARE MADE. THE GROUND BARS AND THEIR TERMINATIONS SHALL BE COATED WITH AN ANTIOXIDANT MATERIAL WIPE CLEAN ALL EXCESS. UNLESS GROUND WELLS SPECIFIED IN DESIGN THEN SEE EQUIPMENT GROUNDING PLAN.
- 10. TRANSMISSION LINE GROUNDS SHALL HAVE 2 INCHES OF SLACK. THEY ARE NOT TO BE INSTALLED TIGHT TO ACCOMMODATE FOR MOVEMENT. ALL GROUND WIRE SHALL HAVE A MINIMUM BENDING RADIUS OF 12"
- ALL CONNECTIONS TO GROUND BARS / WELLS OR EQUIPMENT WITH TWO-HOLE COMPRESSION LUGS. GROUNDING CONNECTORS SHALL BE COPPER. NUTS, BOLTS, AND WASHER SHALL BE STAINLESS STEEL.

4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION **DRAWINGS**

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 **BARTHOLOMEW COUNTY**

SITE NUMBER HV863

POD NUMBER 14-2748

DRAWN BY CHECKED BY DATF:

SHEET TITLE:

NAR

MFP

06.17.14

ELECTRICAL & GROUNDING NOTES

SHEET NUMBER

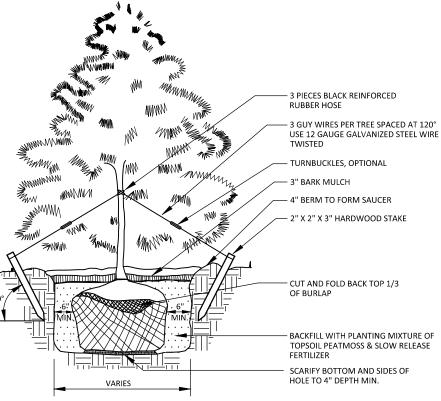
L-6

GROUNDING NOTES:

- APPLY ANTIOXIDANT COMPOUND TO ALL GROUND BARS AND GROUND CONNECTIONS WIPE CLEAN ALL EXCESS.
- MAKE ALL CONNECTIONS TO GROUND BAR OR METAL EQUIPMENT ENCLOSURES WITH
- GROUNDING CONNECTORS SHALL BE COPPER. NUTS, BOLTS, AND WASHERS SHALL BE
- 4. ALL GROUND WIRE SHALL HAVE A MINIMUM BENDING RADIUS OF 12".

GENERAL NOTES

- ALL PLANTS MUST BE HEALTHY, FREE OF PESTS AND DISEASES.
- STANDARDS SET FORTH IN 'AMERICAN STANDARDS FOR NURSERY STOCK' REPRESENT GUIDELINE SPECIFICATIONS ONLY AND CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR ALL PLANT MATERIAI
- THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A
 PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF FINAL ACCEPTANCE BY THE OWNER. THE
 LANDSCAPE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF
 THE GUARANTEE PERIOD (AS PER DIRECTION OF THE OWNER).
- 4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) AREAS AND LAWNS UNTIL THE WORK AREAS ARE ACCEPTED IN TOTAL.
- 5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCUR AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
- 6. ALL DISTURBED AREAS AND ISLANDS SHALL BE SEEDED OR SODDED PER DIRECTION OF THE
- 7. IF WORK IS REQUIRED WITHIN THE EASEMENTS CAUSING REMOVAL OR DAMAGE OF LANDSCAPE MATERIALS, THE OWNER SHALL BE RESPONSIBLE FOR REPLACEMENT OF MATERIALS.
- 8. ALL UNHEALTHY OR DEAD PLANT MATERIAL SHALL BE REPLACED WITHIN ONE YEAR, OR BY THE NEXT PLANTING PERIOD, WHICHEVER COMES FIRST, WHILE OTHER DEFECTIVE PLANT MATERIAL SHALL BE REPLACED OR REPAIRED WITHIN THREE MONTHS.
- 9. ALL PLANTING BEDS SHALL BE COVERED IN A 3" THICK LAYER OF RIVER STONE.



TYPICAL CONIFEROUS TREE PLANTING DETAIL

KEY

o.c. No.

B&B	- Balled and Burlapped
cal.	- Caliper
cont.	- Container
ht.	- Height

- On Center

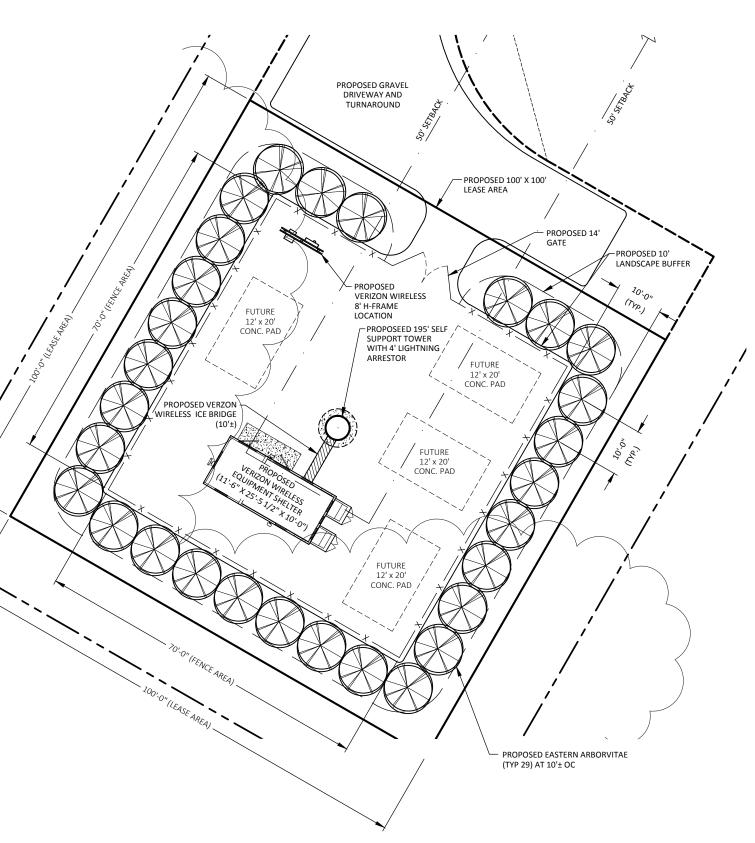
- Number

PLANT MATERIALS LIST

PLANT MATERIALS LIST						
QTY. BOTANICAL NAME COMMON NAME		SIZE	CONTAINER	NOTES		
· · · · · · · · · · · · · · · · · · ·						
29 Thuja occidentalis EASTERN ARBORVI		EASTERN ARBORVITAE	Min. 2" cal.	B&B	6' Height, 10' o.c.	

QUANTITIES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR THE FINAL COUNT. IF THERE ARE ANY DISCREPANCIES IN THE QUANTITIES, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT.









312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	6.18.14	PRELIM ISSUE
В	6.20.14	CLIENT COMMENTS
С	8.12.14	CLIENT COMMENTS
D	9.8.14	ZONING COMMENTS

SITE INFORMATION:

COLUMBUS

6350 S. INWOOD DRIVE COLUMBUS, IN 47201 BARTHOLOMEW COUNTY

SITE NUMBER:

POD NUMBER: 14-2748

DRAWN BY: NAB

DRAWN BY: CHECKED BY: DATE:

SHEET TITLE:

LANDSCAPE PLAN

MEP

06.17.14

SHEET NUMBER:

LS-1

Columbus – Bartholomew County Planning Department Development Standards Variance Application

Planning Department Use Only: Jurisdiction: Columbus Bartholomew County Zoning: Docket No.: CIDS-14-22 Hearing Procedure: Hearing Officer Board of Zoning Appeals BY:
Development Standards Variance Application:
Applicant Information (the person or entity that will own and/or execute what is proposed): Name:
Property Owner Information (the "owner" does not include tenants or contract buyers):
Name: Stephen & Andrea Ronsheim
Name: Steplen & Andrea Ronsheim Address: 3475 (arr 4111 Rd Colombs /W (17201 (city) (state) (zip)
Phone No.: 312 -343-9501 Fax No.: E-mail Address: Steve a Scending S. Com
Notification Information (list the person to whom all correspondence regarding this application should be directed): Name:
Address: 14 Howard PA Ff Wright FY 41011 (state) (zip)
Phone No.: 513-235-1022 Fax No.: E-mail Address: JMarejletha pyranians - Com
How would you prefer to receive information (please check one): E-mail Phone Fax Mail
Property Information:
Address: Colombs / N 4726 (city) (state) (zip)
or General Location (if no address has been assigned provide a street corner, subdivision lot number, or attach a legal description):

Variance Requested:
I am requesting a variance from Section of the Zoning Ordinance to allow the following:
Build a communication town at Lot 6 of woodside Business
Park, Columbis, IN. the tower will be 195'in height.
All other requirements will be not:
Variance Request Justification:
The Indiana Code and the Columbus & Bartholomew County Zoning Ordinance establish specific criteria that each must be met in order for a development standards variance to be approved. Describe how the variance request meets each of the following criteria.
The approval will not be injurious to the public health, safety, morals, and general welfare of the community.
The Federal Government has guaranteed there are no health, softy hazards from a communication tower.
health, softy hazards from a communication tower.
The use and value of the area adjacent to the property included in the variance will not be affected in a substantially adverse manner.
There is no data that supports loss in value for a
tower on the property.
The strict application of the terms of the Zoning Ordinance will result in practical difficulties in the use of the property. This situation shall not be self-imposed; nor be based on a perceived reduction of, or restriction on, economic gain.
The proposed compunication tower is a resort of increwed
Usege Idemand for handwith by local residents.

Application Fee Refund Information:

it is approved by the Board of Zoning Appeals. The refund weeks after the Board of Zoning Appeals approval to proc	ess the refund and issue the chec	rm of a check. It ma	ay take several
Name: John Marcelleth			
Name: John Marcelleth Address: 14 (street)	T+. Wright	(state)	(zip)
Applicant's Signature:			
The information included in and with this application is cor	npletely true and correct to the be	st of my knowledge	and belief.
(frh			
(Applicant's Signature)	(Date)		-
Property Owner's Signature (the "owner" does not inc	clude tenants or contract buyers):		
I authorize the filing of this application and will allow the Planalyzing this request. Further, I will allow a public notice the request is complete.	anning Department staff to enter	this property for the	purpose of e processing of
(Owner'e Signature)	(Date)	4/14	-
(Owner's Signature)	(Date)		_

The adopted Planning Department Schedule of Application Fees provides for the refunding of application fees for this request if

RECEIPT COLUMBUS PLAN COMMISSION

General FUND	Nº	8475
COLUMBUS IN., August 14 2014		
RECEIVED FROM Horvath Tours 1		\$ 260.00
THE SUM OF Two hundred and	sixty dollars and %/100	Ďollars
ON ACCOUNT OF development standar	rds br. + ZCC for rell to	quer Q
PAYMENT TYPE & AMOUNT	wad	tordl
CASH CHECK 5072_ M.O 2	Anici Initoton	-
E.F.TOTHER	AUTHORIZED SIGNATURE	